

=>  
=>  
=> fil reg

FILE 'REGISTRY' ENTERED AT 12:12:41 ON 30 JUL 2004  
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STRUCTURE FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6  
DICTIONARY FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> fil zcaplus

FILE 'ZCAPLUS' ENTERED AT 12:12:46 ON 30 JUL 2004  
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FILE COVERS 1907 - 30 Jul 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:12:49 ON 30 JUL 2004  
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FILE COVERS 1907 - 30 Jul 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> FIL STNGUIDE

FILE 'STNGUIDE' ENTERED AT 12:12:52 ON 30 JUL 2004  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 23, 2004 (20040723/UP).

=> d que l199

L182( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON US2002-098644/AP,PRN  
L183 SEL PLU=ON L182 1- RN : 169 TERMS  
L184( 169)SEA FILE=REGISTRY ABB=ON PLU=ON L183  
L185( 4)SEA FILE=REGISTRY ABB=ON PLU=ON L184 AND (C16H14N2O3S OR  
C17H14O4S OR C16H9F5N2O3S OR C16H14N2O3S)/MF  
L186( 13)SEA FILE=REGISTRY ABB=ON PLU=ON L184 AND (C17H14F3N3O3S OR  
C17H12F4N2O4S OR C17H16N2O4S OR C16H11CLF3N3O2S OR C17H12F2O4S  
OR C16H13F2NO4S OR C17H14F3N3O2S OR C16H12F3N3O2S OR C17H14F3N3  
O2S OR C17H12BRF02S2 OR C13H18N2O5S OR C16H13F3N4O2S OR  
C14H13N3O4S2)/MF  
L187( 17)SEA FILE=REGISTRY ABB=ON PLU=ON L185 OR L186  
L188( 40)SEA FILE=REGISTRY ABB=ON PLU=ON (123653-11-2/CRN OR 162011-90  
-7/CRN OR 169590-41-4/CRN OR 170569-86-5/CRN OR 177660-77-4/CRN  
OR 177660-80-9/CRN OR 177660-92-3/CRN OR 181695-72-7/CRN OR  
185344-51-8/CRN OR 185344-55-2/CRN OR 195061-34-8/CRN OR  
195065-56-6/CRN OR 195065-57-7/CRN OR 71125-38-7/CRN OR  
80937-31-1/CRN OR 88149-94-4/CRN OR 93014-16-5/CRN)  
L189( 57)SEA FILE=REGISTRY ABB=ON PLU=ON L187 OR L188  
L190( 32)SEA FILE=REGISTRY ABB=ON PLU=ON L184 AND MAN/CI  
L191( 30)SEA FILE=REGISTRY ABB=ON PLU=ON L190 NOT (39391-18-9 OR  
80619-02-9)/RN  
L192( 1373)SEA FILE=REGISTRY ABB=ON PLU=ON CYCLOSPORIN/BI  
L193( 1403)SEA FILE=REGISTRY ABB=ON PLU=ON L191 OR L192  
L194( 2)SEA FILE=REGISTRY ABB=ON PLU=ON (39391-18-9 OR 80619-02-9)/RN  
L195( 120)SEA FILE=REGISTRY ABB=ON PLU=ON L184 NOT (L194 OR L193 OR  
L189)  
L196( 6040)SEA FILE=HCAPLUS ABB=ON PLU=ON L195  
L197( 1841)SEA FILE=HCAPLUS ABB=ON PLU=ON L189  
L198( 14626)SEA FILE=HCAPLUS ABB=ON PLU=ON L193  
L199 23 SEA FILE=HCAPLUS ABB=ON PLU=ON L196 AND L197 AND L198

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L1      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  39391-18-9/RN
L2      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  80619-02-9/RN
L3      SEL  PLU=ON  L1 1- CHEM :      36 TERMS
L4      22401 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L3
L6      12138 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L4 (5A) (?INHIBIT? OR ?RUPT?
OR ?BLOCK? OR ?DISABL? OR ?STOP?)
L7      SEL  PLU=ON  L2 1- CHEM :      10 TERMS
L8      4694 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L7
L9      3004 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8 (5A) (?INHIBIT? OR ?RUPT?
OR ?BLOCK? OR ?DISABL? OR ?STOP?)
L10     6670 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IMMUNOMODULATORS/CT
L11     16528 SEA FILE=HCAPLUS ABB=ON  PLU=ON  IMMUNOSUPPRESSANTS/CT
L12     8836 SEA FILE=HCAPLUS ABB=ON  PLU=ON  CYTOTOXIC AGENTS/CT
L13     4356 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (PROLIFERAT? (L) INHIB?)/CW
L14     0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANTIPROLIFERAT?/CW
L15     58930 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANTI-INFLAMMATORY AGENTS+PFT,N
T/CT
L16     32725 SEA FILE=HCAPLUS ABB=ON  PLU=ON  INFLAMMATION/CT
L17     377 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TRANSPLANT AND TRANSPLANTATION
/CT
L18     53343 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (LEUKOCYT? OR LEUCOCYT?)/CW
L19     0 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (ANTILEUKOCYT? OR ANTILEUCOCYT
?)/CW
L20     19595 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ?CYCLOSPORIN?
L21     177028 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L10 OR L11 OR L12 OR L13 OR
L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20)
L32     650 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 (L) L9
L34     306 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND L21
L36     205 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34 AND (AY<1997 OR PY<1997
OR PRY<1997)
L37     88 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND (MIX? OR ?MIXT? OR
?COMBIN? OR ?COMPRIS? OR ?COMPOS? OR COMB OR COMPN OR DUAL OR
?SYNERG? OR BLEND)
L38     75 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L37 AND (L10 OR L11 OR L12 OR
L15 OR L20)
L39     4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L38 AND L20
L45 (    1) SEA FILE=HCAPLUS ABB=ON  PLU=ON  US2002-098644/AP, PRN
L46     SEL  PLU=ON  L45 1- RN :      169 TERMS
L47 (    169) SEA FILE=REGISTRY ABB=ON  PLU=ON  L46
L48 (    4) SEA FILE=REGISTRY ABB=ON  PLU=ON  L47 AND (C16H14N2O3S OR
C17H14O4S OR C16H9F5N2O3S OR C16H14N2O3S)/MF
L49 (    13) SEA FILE=REGISTRY ABB=ON  PLU=ON  L47 AND (C17H14F3N3O3S OR
C17H12F4N2O4S OR C17H16N2O4S OR C16H11CLF3N3O2S OR C17H12F2O4S
OR C16H13F2NO4S OR C17H14F3N3O2S OR C16H12F3N3O2S OR C17H14F3N3
O2S OR C17H12BRFO2S2 OR C13H18N2O5S OR C16H13F3N4O2S OR
C14H13N3O4S2)/MF
L50 (    17) SEA FILE=REGISTRY ABB=ON  PLU=ON  L48 OR L49
L51 (    40) SEA FILE=REGISTRY ABB=ON  PLU=ON  (123653-11-2/CRN OR 162011-90
-7/CRN OR 169590-41-4/CRN OR 170569-86-5/CRN OR 177660-77-4/CRN
OR 177660-80-9/CRN OR 177660-92-3/CRN OR 181695-72-7/CRN OR
185344-51-8/CRN OR 185344-55-2/CRN OR 195061-34-8/CRN OR
195065-56-6/CRN OR 195065-57-7/CRN OR 71125-38-7/CRN OR
80937-31-1/CRN OR 88149-94-4/CRN OR 93014-16-5/CRN)
L52 (    57) SEA FILE=REGISTRY ABB=ON  PLU=ON  L50 OR L51
L53 (    32) SEA FILE=REGISTRY ABB=ON  PLU=ON  L47 AND MAN/CI
L54 (    30) SEA FILE=REGISTRY ABB=ON  PLU=ON  L53 NOT (39391-18-9 OR
80619-02-9)/RN

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L55 ( 1373)SEA FILE=REGISTRY ABB=ON PLU=ON CYCLOSPORIN/BI  
 L56 ( 1403)SEA FILE=REGISTRY ABB=ON PLU=ON L54 OR L55  
 L57 ( 2)SEA FILE=REGISTRY ABB=ON PLU=ON (39391-18-9 OR 80619-02-9)/RN  
  
 L58 ( 120)SEA FILE=REGISTRY ABB=ON PLU=ON L47 NOT (L57 OR L56 OR L52)  
 L59 ( 6040)SEA FILE=HCAPLUS ABB=ON PLU=ON L58  
 L60 ( 1841)SEA FILE=HCAPLUS ABB=ON PLU=ON L52  
 L61 ( 14626)SEA FILE=HCAPLUS ABB=ON PLU=ON L56  
 L62 ( 23)SEA FILE=HCAPLUS ABB=ON PLU=ON L59 AND L60 AND L61  
 L63 ( 57)SEA FILE=HCAPLUS ABB=ON PLU=ON L60 AND L61  
 L64 ( 34)SEA FILE=HCAPLUS ABB=ON PLU=ON L63 NOT L62  
 L65 ( 3)SEA FILE=HCAPLUS ABB=ON PLU=ON L64 AND ?LIPOXYGEN?  
 L66 ( 1)SEA FILE=HCAPLUS ABB=ON PLU=ON US2002-098644/AP,PRN  
 L67 SEL PLU=ON L66 1- RN : 169 TERMS  
 L68 ( 169)SEA FILE=REGISTRY ABB=ON PLU=ON L67  
 L69 ( 4)SEA FILE=REGISTRY ABB=ON PLU=ON L68 AND (C16H14N2O3S OR  
 C17H14O4S OR C16H9F5N2O3S OR C16H14N2O3S)/MF  
 L70 ( 13)SEA FILE=REGISTRY ABB=ON PLU=ON L68 AND (C17H14F3N3O3S OR  
 C17H12F4N2O4S OR C17H16N2O4S OR C16H11CLF3N3O2S OR C17H12F2O4S  
 OR C16H13F2NO4S OR C17H14F3N3O2S OR C16H12F3N3O2S OR C17H14F3N3  
 O2S OR C17H12BRF2O2S OR C13H18N2O5S OR C16H13F3N4O2S OR  
 C14H13N3O4S2)/MF  
 L71 ( 17)SEA FILE=REGISTRY ABB=ON PLU=ON L69 OR L70  
 L72 ( 40)SEA FILE=REGISTRY ABB=ON PLU=ON (123653-11-2/CRN OR 162011-90  
 -7/CRN OR 169590-41-4/CRN OR 170569-86-5/CRN OR 177660-77-4/CRN  
 OR 177660-80-9/CRN OR 177660-92-3/CRN OR 181695-72-7/CRN OR  
 185344-51-8/CRN OR 185344-55-2/CRN OR 195061-34-8/CRN OR  
 195065-56-6/CRN OR 195065-57-7/CRN OR 71125-38-7/CRN OR  
 80937-31-1/CRN OR 88149-94-4/CRN OR 93014-16-5/CRN)  
 L73 ( 57)SEA FILE=REGISTRY ABB=ON PLU=ON L71 OR L72  
 L74 ( 32)SEA FILE=REGISTRY ABB=ON PLU=ON L68 AND MAN/CI  
 L75 ( 30)SEA FILE=REGISTRY ABB=ON PLU=ON L74 NOT (39391-18-9 OR  
 80619-02-9)/RN  
 L76 ( 1373)SEA FILE=REGISTRY ABB=ON PLU=ON CYCLOSPORIN/BI  
 L77 ( 1403)SEA FILE=REGISTRY ABB=ON PLU=ON L75 OR L76  
 L78 ( 2)SEA FILE=REGISTRY ABB=ON PLU=ON (39391-18-9 OR 80619-02-9)/RN  
  
 L79 ( 120)SEA FILE=REGISTRY ABB=ON PLU=ON L68 NOT (L78 OR L77 OR L73)  
 L80 ( 6040)SEA FILE=HCAPLUS ABB=ON PLU=ON L79  
 L81 ( 1841)SEA FILE=HCAPLUS ABB=ON PLU=ON L73  
 L82 ( 14626)SEA FILE=HCAPLUS ABB=ON PLU=ON L77  
 L83 ( 23)SEA FILE=HCAPLUS ABB=ON PLU=ON L80 AND L81 AND L82  
 L84 ( 57)SEA FILE=HCAPLUS ABB=ON PLU=ON L81 AND L82  
 L85 ( 34)SEA FILE=HCAPLUS ABB=ON PLU=ON L84 NOT L83  
 L86 ( 3)SEA FILE=HCAPLUS ABB=ON PLU=ON L85 AND ?LIPOXYGEN?  
 L87 ( 9357)SEA FILE=HCAPLUS ABB=ON PLU=ON (?LIPOXYGEN? (L) (?INHIBIT?  
 OR ?BLOCK? OR ?RUPT? OR ?DISABL?))  
 L88 ( 201)SEA FILE=HCAPLUS ABB=ON PLU=ON (?CYCLOXYGEN? (L) (?INHIBIT?  
 OR ?BLOCK? OR ?RUPT? OR ?DISABL?))  
 L89 ( 15717)SEA FILE=HCAPLUS ABB=ON PLU=ON (?CYCLOOXYGEN? (L) (?INHIBIT?  
 OR ?BLOCK? OR ?RUPT? OR ?DISABL?))  
 L90 ( 7686)SEA FILE=HCAPLUS ABB=ON PLU=ON (COX? (L) (?INHIBIT? OR  
 ?BLOCK? OR ?RUPT? OR ?DISABL?))  
 L91 ( 9729)SEA FILE=HCAPLUS ABB=ON PLU=ON (LIPOX? (L) (?INHIBIT? OR  
 ?BLOCK? OR ?RUPT? OR ?DISABL?))  
 L92 ( 9731)SEA FILE=HCAPLUS ABB=ON PLU=ON L87 OR L91  
 L93 ( 18652)SEA FILE=HCAPLUS ABB=ON PLU=ON (L88 OR L89 OR L90)  
 L94 ( 19593)SEA FILE=HCAPLUS ABB=ON PLU=ON ?CYCLOSPORIN?  
 L95 ( 35)SEA FILE=HCAPLUS ABB=ON PLU=ON L92 AND L93 AND L94  
 L96 ( 28)SEA FILE=HCAPLUS ABB=ON PLU=ON L95 NOT (L83 OR L86)



L97 ( 5876804) SEA FILE=HCAPLUS ABB=ON PLU=ON (?COMBIN? OR ?COMPOS? OR MIX?  
OR ?MIXT? OR ?COMPN? OR ?COMBN?)  
L98 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L96 AND L97  
L99 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 OR L65 OR L98  
L100 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L99 AND (AY<1997 OR PY<1997  
OR PRY<1997)

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L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 39391-18-9/RN  
L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON 80619-02-9/RN  
L3 SEL PLU=ON L1 1- CHEM : 36 TERMS  
L4 22401 SEA FILE=HCAPLUS ABB=ON PLU=ON L3  
L6 12138 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (5A) (?INHIBIT? OR ?RUPT?  
OR ?BLOCK? OR ?DISABL? OR ?STOP?)  
L7 SEL PLU=ON L2 1- CHEM : 10 TERMS  
L8 4694 SEA FILE=HCAPLUS ABB=ON PLU=ON L7  
L9 3004 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 (5A) (?INHIBIT? OR ?RUPT?  
OR ?BLOCK? OR ?DISABL? OR ?STOP?)  
L10 6670 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOMODULATORS/CT  
L11 16528 SEA FILE=HCAPLUS ABB=ON PLU=ON IMMUNOSUPPRESSANTS/CT  
L12 8836 SEA FILE=HCAPLUS ABB=ON PLU=ON CYTOTOXIC AGENTS/CT  
L13 4356 SEA FILE=HCAPLUS ABB=ON PLU=ON (PROLIFERAT? (L) INHIB?)/CW  
L14 0 SEA FILE=HCAPLUS ABB=ON PLU=ON ANTIPROLIFERAT?/CW  
L15 58930 SEA FILE=HCAPLUS ABB=ON PLU=ON ANTI-INFLAMMATORY AGENTS+PFT,N  
T/CT  
L16 32725 SEA FILE=HCAPLUS ABB=ON PLU=ON INFLAMMATION/CT  
L17 377 SEA FILE=HCAPLUS ABB=ON PLU=ON TRANSPLANT AND TRANSPLANTATION  
/CT  
L18 53343 SEA FILE=HCAPLUS ABB=ON PLU=ON (LEUKOCYT? OR LEUCOCYT?)/CW  
L19 0 SEA FILE=HCAPLUS ABB=ON PLU=ON (ANTILEUKOCYT? OR ANTILEUCOCYT  
?)/CW  
L20 19595 SEA FILE=HCAPLUS ABB=ON PLU=ON ?CYCLOSPORIN?  
L21 177028 SEA FILE=HCAPLUS ABB=ON PLU=ON (L10 OR L11 OR L12 OR L13 OR  
L14 OR L15 OR L16 OR L17 OR L18 OR L19 OR L20)  
L23 410 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND L9 AND L21  
L40 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 AND REVIEW/DT  
L42 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND (MIX? OR ?MIXT? OR  
?COMBIN? OR ?COMPRIS? OR ?COMPOS? OR COMB OR COMPN OR DUAL OR  
?SYNERG? OR BLEND)  
L43 18 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND (L10 OR L11 OR L12 OR  
L15 OR L20)

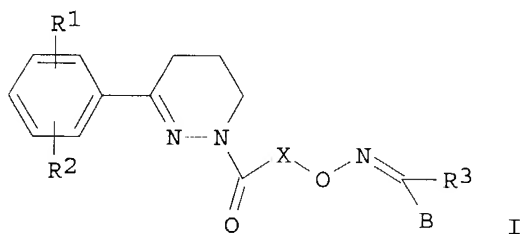
=> d l199 ibib abs hitind fhitrn

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L199 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2003:991488 HCAPLUS  
DOCUMENT NUMBER: 140:27834  
TITLE: Preparation of pyridazinyloximes as phosphodiesterase  
IV inhibitors.  
INVENTOR(S): Eggenweiler, Hans-Michael; Beier, Norbert; Schelling,  
Pierre; Wolf, Michael  
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
SOURCE: PCT Int. Appl., 137 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent

LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104205	A1	20031218	WO 2003-EP5173	20030516
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10225574	A1	20031218	DE 2002-10225574	20020610
PRIORITY APPLN. INFO.:			DE 2002-10225574 A 20020610	
OTHER SOURCE(S):			MARPAT 140:27834	
GI				



- AB Title compds. [I; R<sub>1</sub>, R<sub>2</sub> = H, OH, OR<sub>8</sub>, SR<sub>8</sub>, SOR<sub>8</sub>, SO<sub>2</sub>R<sub>8</sub>, halo; R<sub>1</sub>R<sub>2</sub> = OCH<sub>2</sub>O, OCH<sub>2</sub>CH<sub>2</sub>O; R<sub>3</sub> = H, AR<sub>7</sub>, COAR<sub>7</sub>, CO<sub>2</sub>AR<sub>7</sub>, CONH<sub>2</sub>, NH<sub>2</sub>, etc.; R<sub>7</sub> = H, CO<sub>2</sub>H, NH<sub>2</sub>, OH, etc.; R<sub>8</sub> = (substituted) alkyl, alkenyl, cycloalkyl, alkylencycloalkyl, etc.; A = null, (O, S, SO, SO<sub>2</sub>, imino-interrupted) alkylene, alkenylene, cycloalkylene; B = (substituted) aryl, heteroaryl; X = (O, S, SO, SO<sub>2</sub>, imino-interrupted) alkylene], were prepared as phosphodiesterase IV inhibitors for treating osteoporosis, tumors, cachexia, atherosclerosis, rheumatoid arthritis, multiple sclerosis, diabetes mellitus, inflammatory processes, allergies, asthma, autoimmune diseases, myocardial diseases and AIDS (no data). Thus, 3-(3-ethoxy-4-methoxyphenyl)-5,6-dihydro-4H-pyridazine was treated sequentially with chloroacetyl chloride, N-hydroxyphthalimide, ethanolamine, and 4-methoxybenzaldehyde to give 4-methoxybenzaldehyde O-[2-[3-(3-ethoxy-4-methoxyphenyl)-5,6-dihydro-4H-pyridazin-1-yl]-2-oxoethyl]oxime.
- IC ICM C07D237-04  
 ICS C07D401-12; A61K031-50; A61P037-00
- CC 28-15 (Heterocyclic Compounds (More Than One Hetero Atom))  
 Section cross-reference(s): 1
- IT 50-24-8, Prednisolone 53-03-2, Prednisone 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfapyrazole 58-55-9, Theophylline, biological studies 59-05-2, Methotrexate 59-42-7, Phenylephrine 64-86-8, Colchicine 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine maleate 124-94-7D, Triamcinolone, acetonide derivative 315-30-0, Allopurinol 317-34-0, Aminophylline 404-86-4,

Capsaicin 446-86-6, Azathioprine 522-48-5, Tetrahydrozoline hydrochloride 550-99-2, Naphazoline hydrochloride 586-06-1, Metaproterenol 865-21-4, Vinblastine 1218-35-5, Xylometazoline hydrochloride 2315-02-8, Oxymetazoline hydrochloride 3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromarone 7440-57-5D, Gold, aurothio derivs. 7683-59-2, Isoproterenol 14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9, Albuterol 22254-24-6, Ipratropium bromide 23031-25-6, Terbutalin 28797-61-7, Pirenzepin 30286-75-0, Oxitropium bromide 30392-40-6, Bitolterol 38677-81-5, Pirbuterol 51333-22-3, Budesonide 58581-89-8, Azelastine **59865-13-3**, Cyclosporin 68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide 79794-75-5, Loratadine 80880-90-6, Telenzepine 83799-24-0, Fexofenadine 83869-56-1, GM-CSF 83881-51-0, Cetirizine 89365-50-4, Salmeterol **93211-49-5**, L-651392 96566-25-5, Ablukast 100643-71-8, Desloratadine 103177-37-3, Pranlukast **103475-41-8**, Tepoxalin 106096-93-9, Basic fibroblast growth factor 107753-78-6, Zafirlukast **111406-87-2**, Zileuton **118414-82-7**, Mk-886 120128-20-3, RG-12525 120443-16-5, Verlukast 126544-47-6, Ciclesonide **128253-31-6**, Bay x 1005 136310-93-5, Tiotropium bromide **140841-32-3**, Zd-2138 **141579-54-6**, Fenleuton **141579-87-5**, Abbott 79175 143538-27-6, Bay x 7195 **147030-01-1**, Mk-591 147398-01-4, CGS-25019c 147432-77-7, Ontazolast 151581-24-7, Irelukast **154355-76-7**, Abbott 85761 **158930-07-5**, L-739010 158966-92-8, Montelukast **162011-90-7**, Rofecoxib 162750-10-9, Sb-210661 168154-07-2, L-746530 170277-31-3, Infliximab 171964-73-1, ZD-0892 174636-32-9, Talnetant 185243-69-0, Etanercept 204974-93-6, BIIL 260 257892-34-5, D-4418 331731-18-1, D2E7 346735-24-8, BIIL 284 350610-64-9, NKP-608c 446023-33-2, UT-77 634206-58-9D, hydrazone derivative  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(coadministration; preparation of pyridazinyloximes as phosphodiesterase IV inhibitors)

IT **59865-13-3**, Cyclosporin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(coadministration; preparation of pyridazinyloximes as phosphodiesterase IV inhibitors)

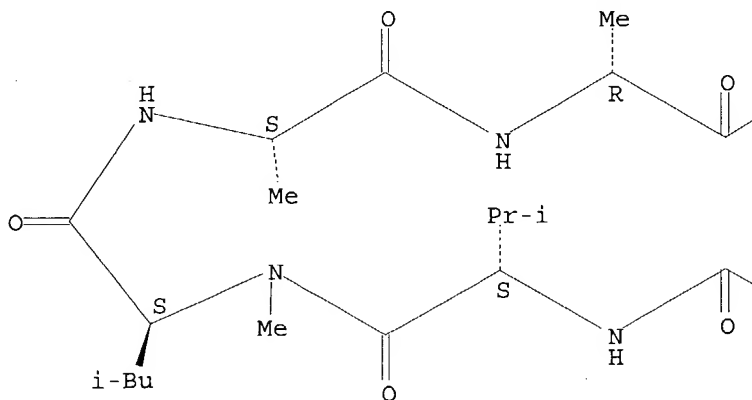
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

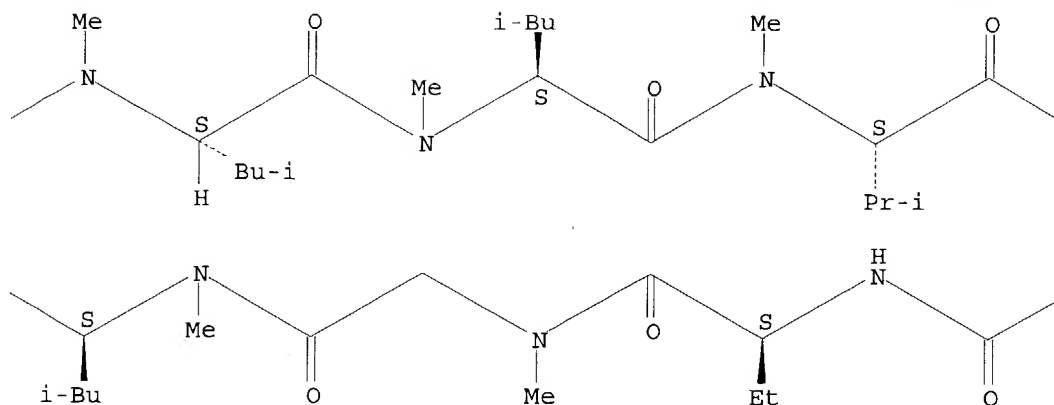
Absolute stereochemistry.

Double bond geometry as shown.

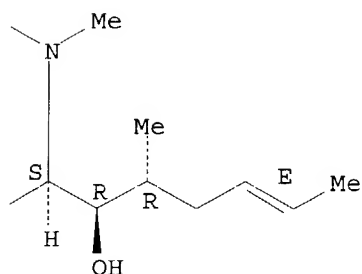
PAGE 1-A



PAGE 1-B



PAGE 1-C



IT 59865-13-3, Cyclosporin 93211-49-5, L-651392  
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 118414-82-7, Mk-886 128253-31-6, Bay x 1005  
 140841-32-3, Zd-2138 141579-54-6, Fenleuton  
 141579-87-5, Abbott 79175 147030-01-1, Mk-591  
 154355-76-7, Abbott 85761 158930-07-5, L-739010  
 162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (coadministration; preparation of pyridazinyloximes as phosphodiesterase IV inhibitors)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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YOU HAVE REQUESTED DATA FROM 22 ANSWERS - CONTINUE? Y/(N):y

L199 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:991487 HCAPLUS  
 DOCUMENT NUMBER: 140:42462  
 TITLE: Synthesis of tyrosinyl or alaninyl pyridazine derivatives for use as phosphodiesterase IV inhibitors for the treatment of allergic, autoimmune and inflammatory diseases  
 INVENTOR(S): Eggenweiler, Hans-Michael; Wolf, Michael  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 129 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104204	A1	20031218	WO 2003-EP4930	20030512
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10224888	A1	20031224	DE 2002-10224888	20020605
PRIORITY APPLN. INFO.:			DE 2002-10224888 A 20020605	
OTHER SOURCE(S):			MARPAT 140:42462	
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Synthesis of title compds., e.g. (I,III), which act as phosphodiesterase IV inhibitors and can be used for treating osteoporosis, tumors, cachexia, atherosclerosis, rheumatoid arthritis, multiple sclerosis, diabetes mellitus, inflammatory processes, allergies, asthma, autoimmune diseases, myocardial diseases, and AIDS (no data), was given. Thus, Z-L-Tyr(tBu)-OSu was reacted with (II), the tBu protecting group cleaved, and the resulting intermediate reacted with Cl-(CH<sub>2</sub>)<sub>2</sub>NMe<sub>2</sub>.HCl to give an intermediate which was Tyr-N-deprotected to give I. Similarly, Boc-β-(3-pyridyl)-D-Ala-OH led to III. In vitro tests for effectiveness were described without results, and formulations for various forms of administration were given.

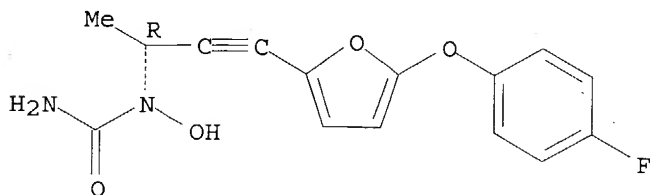
IC ICM C07D237-04  
 ICS C07D401-12; C07D401-06

CC 34-2 (Amino Acids, Peptides, and Proteins)  
 Section cross-reference(s): 1, 7, 25, 27, 28, 63

IT 141579-87-5, Abbott 79175  
 RL: MSC (Miscellaneous)  
 (Abbott 79175; compds. containing tyrosinyl or alaninyl pyridazine derivs. and for use as phosphodiesterase IV inhibitors for the treatment of

- diseases)
- IT 50-24-8, Prednisolone 53-03-2, Prednisone 57-22-7, Vincristin 57-66-9, Probenecid 57-96-5, Sulfinpyrazone 58-55-9, Theophylline, miscellaneous 59-05-2, Methotrexate 59-42-7, Phenylephrine 76-25-5, Triamcinolone acetonide 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 315-30-0, Allopurinol 317-34-0, Aminophylline 404-86-4, Capsaicine 446-86-6, Azathioprine 522-48-5, Tetrahydrozoline hydrochloride 550-99-2, Naphazoline hydrochloride 586-06-1, Metaproterenol 865-21-4, Vinblastin 1218-35-5, Xylometazoline hydrochloride 2315-02-8, Oxymetazoline hydrochloride 3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromaron 5534-09-8, Beclomethasone dipropionate 7683-59-2, Isoproterenol 9004-08-4, Cathepsin 14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9, Albuterol 22254-24-6, Ipratropium bromide 23031-25-6, Terbutaline 28797-61-7, Pirenzepine 30286-75-0, Oxitropium bromide 30392-40-6, Bitolterol 38677-81-5, Pirbuterol 51333-22-3, Budesonide 58581-89-8, Azelastine 68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide **79217-60-0**, Cyclosporin 79794-75-5, Loratadine 79955-99-0, Stromelysin-1 80474-14-2, Fluticasone propionate 80880-90-6, Telenzepine 83799-24-0, Fexofenadine 83869-56-1, Granulocyte macrophage colony stimulating factor 83881-51-0 83919-23-7, Mometasone furoate 89365-50-4, Salmeterol **93211-49-5**, 1651392 96566-25-5, Ablukast 100643-71-8, Desloratadine 103177-37-3, Pranlukast **103475-41-8**, Tepoxalin 106096-93-9 107753-78-6, Zafirlukast **111406-87-2**, Zileuton **118414-82-7**, Mk886 120128-20-3, Rg12525 120443-16-5, Verlukast 126544-47-6, Ciclesonide **128253-31-6**, Bay x1005 136310-93-5, Tiotropium bromide 140610-48-6, Stromelysin-2 **140841-32-3**, Zd2138 **141579-54-6**, Fenleuton 143538-27-6, Bay x7195 145267-01-2, Stromelysin-3 **147030-01-1**, Mk591 147398-01-4, Cgs25019c 147432-77-7, Ontazolast 151581-24-7, Iralukast **154355-76-7**, Abt761 **158930-07-5**, 1739010 158966-92-8, Montelukast **162011-90-7**, Rofecoxib 162750-10-9, Sb210661 168154-07-2, 1746530 170277-31-3, Infliximab 171964-73-1 174636-32-9, Talnetant 185243-69-0, Etanercept 204974-93-6, Biil 284/260 257892-34-5, d4418 331731-18-1, d2e7 350610-64-9, Nkp608c 446023-33-2, UT 77
- RL: MSC (Miscellaneous)  
(compds. containing tyrosinyl or alaninyl pyridazine derivs. and for use as phosphodiesterase IV inhibitors for the treatment of diseases)
- IT **141579-87-5**, Abbott 79175
- RL: MSC (Miscellaneous)  
(Abbott 79175; compds. containing tyrosinyl or alaninyl pyridazine derivs. and for use as phosphodiesterase IV inhibitors for the treatment of diseases)
- RN 141579-87-5 HCAPLUS
- CN Urea, N-[(1R)-3-[5-(4-fluorophenoxy)-2-furanyl]-1-methyl-2-propynyl]-N-hydroxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 141579-87-5, Abbott 79175  
RL: MSC (Miscellaneous)  
(Abbott 79175; compds. containing tyrosinyl or alaninyl pyridazine derivs.  
and for use as phosphodiesterase IV inhibitors for the treatment of  
diseases)

IT 79217-60-0, Cyclosporin 93211-49-5, 1651392  
103475-41-8, Tepoxalin 111406-87-2, Zileuton  
118414-82-7, Mk886 128253-31-6, Bay x1005  
140841-32-3, Zd2138 141579-54-6, Fenleuton  
147030-01-1, Mk591 154355-76-7, Abt761  
158930-07-5, 1739010 162011-90-7, Rofecoxib  
RL: MSC (Miscellaneous)  
(compds. containing tyrosinyl or alaninyl pyridazine derivs. and for use as  
phosphodiesterase IV inhibitors for the treatment of diseases)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:971836 HCAPLUS

DOCUMENT NUMBER: 140:23256

TITLE: Combination therapy for treatment of amyotrophic  
lateral sclerosis (ALS) with cyclooxygenase-2 (COX 2)  
inhibitor(s) and a second drug

INVENTOR(S): Isakson, Peter C.

PATENT ASSIGNEE(S): Pharmacia Corporation, USA

SOURCE: PCT Int. Appl., 358 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003101380	A2	20031211	WO 2003-US14547	20030528

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,  
MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,  
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG

US 2004063751	A1	20040401	US 2003-444071	20030523
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PRIORITY APPLN. INFO.: US 2002-384104P P 20020531

US 2003-444071 A 20030523

OTHER SOURCE(S): MARPAT 140:23256

AB A method of treating, preventing, or inhibiting ALS, in a subject in need  
of such treatment, inhibition or prevention. The method comprises  
administering to a subject one or more cyclooxygenase-2 selective  
inhibitor(s) or isomer(s) or pharmaceutically acceptable salt(s),  
ester(s), or prodrug(s) thereof, in combination with one or more second  
drugs, wherein the amount of the cyclooxygenase-2 selective inhibitor(s) or  
isomer(s) or pharmaceutically acceptable salt(s), ester(s), or prodrug(s)  
thereof in combination with the amount of second drug(s) constitutes an ALS  
treatment, inhibition or prevention effective amount

IC ICM A61K

CC 1-11 (Pharmacology)  
 Section cross-reference(s): 2, 15, 63

IT 50-18-0, Cyclophosphamide 50-48-6 50-78-2, Aspirin 50-81-7, Vitamin c, biological studies 51-34-3, SCopolamine 53-39-4, Oxandrolone 53-43-0, Dhea 54-11-5, Nicotine 54-96-6, 3,4-Diaminopyridine 57-00-1, Creatine 57-27-2, Morphine, biological studies 57-42-1, Pethidine 60-54-8, Tetracycline 61-90-5, Leucine, biological studies 70-18-8, Glutathione, biological studies 71-30-7, Cytosine 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-32-5, Isoleucine, biological studies 76-42-6, Oxycodone 76-99-3, Methadone 77-10-1 89-25-8, Edaravone 90-69-7, Lobeline 93-14-1, Robitussin 103-90-2, Acetaminophen 120-29-6, Tropine 125-71-3, Dextromethorphan 144-11-6, Trihexyphenidyl 145-13-1, Pregnenolone 147-24-0, Benadryl 298-50-0, Propantheline 303-98-0, Co-enzyme q10 439-14-5, Diazepam 446-72-0, Genistein 446-86-6, Azathioprine 469-79-4, Ketobemidone 494-52-0, Anabasin 500-38-9, Nordihydroguaiaretic acid 564-25-0, Doxycycline 577-11-7, Colace 596-51-0, Glycopyrrolate 616-91-1, Acetylcysteine 846-49-1, Lorazepam 1077-28-7, DL- $\alpha$ -Lipoic acid 1134-47-0, Lioresal 1622-61-3, Klonopin 1744-22-5, Riluzole 1972-08-3, Dronabinol 2259-96-3, Cyclothiazide 2323-36-6, Deprenyl 2379-57-9, DNQX 4205-90-7, Clonidine 6740-88-1, Ketamine 7235-40-7, Beta carotene 7261-97-4, Dantrolene 7782-49-2, Selenium, biological studies 9001-05-2, Catalase 9013-66-5, Glutathione peroxidase 9054-89-1, Superoxide dismutase 9061-61-4, Ngf 10118-90-8, Minocycline 10540-29-1, Tamoxifen 11006-70-5, Olivomycin 11096-26-7, Erythropoietin 13422-55-4, Methylcobalamin 15687-27-1, Ibuprofen 18378-89-7, Mithramycin 19771-63-2, Procysteine 19982-08-2, Memantine 20830-81-3, Daunomycin 22503-72-6, IDRA 21) 23052-80-4 23052-81-5 27203-92-5, Tramadol 29529-99-5, Pc 10 36505-84-7, Buspirone 51803-78-2, Nimesulide 54739-18-3, Fluvoxamine 54910-89-3, Fluoxetine **59865-13-3**, Cyclosporine 60142-96-3, Gabapentin 64461-82-1, Zanaflex 66357-35-5, Ranitidine 66537-55-1, Mk-771 67684-64-4 **71125-38-7**, Meloxicam 73384-59-5, Ceftriaxone 74913-06-7, Chromomycin 76326-31-3 76820-40-1, Rx-77368 76824-35-6, Famotidine 77086-21-6, Dizocilpine 78794-60-2 79617-96-2, Sertraline **80937-31-1**, Flosulide 84057-84-1, Lamotrigine 85148-82-9 90494-79-4, Xaliproden hydrochloride **93014-16-5** 93384-43-1, Botulinum toxin type a 97240-79-4, Topiramate 100828-16-8 102518-79-6, Huperzine a 102771-26-6, GYKI 52466 103300-74-9, Ta-0910 103548-82-9, Huperzine b 104325-83-9, l-655238 110347-85-8, Selfotel **111406-87-2**, Zileuton 115066-14-3, CNQX 116049-53-7, CGP 40116 118876-58-7 119431-25-3, Eliprodil **123653-11-2**, NS-398 123663-49-0, t-614 124937-52-6, Detrol 125978-95-2, Nitric oxide synthase 126114-66-7, FR 115427 **127245-22-1**, Bf-389 127464-60-2, Vascular endothelial growth factor 127910-31-0, CGP 37849 127910-32-1, CGP 39551 **128253-31-6**, Bay-x-1005 130939-66-1, Neurotrophin-3 134052-73-6, (S)-4-Carboxyphenylglycine 135354-02-8, Xaliproden 137159-92-3, Aptiganel 139226-28-1, Darbufelone 140111-52-0, Epibatidine 142935-03-3, t-588 143375-33-1, Neurotrophin-4/5 143809-38-5 143809-39-6 144301-37-1, NPC 17742 145464-27-3, Immune globulin intravenous pentetate 146669-29-6 147245-92-9, Copaxone 147750-87-6, NS 257 147782-19-2, DCGIV 148152-77-6, Jtp-2942 150010-68-7, LY 215490 150378-17-9, Indinavir **156897-06-2**, Ml-3000 157381-42-5 158205-05-1, L-745337 158959-32-1 158959-33-2 158959-34-3 158959-35-4 158959-37-6 158959-42-3 158959-43-4 158959-46-7 158959-47-8 158959-56-9 159075-60-2, Emfilermin 159429-69-3 159429-70-6 161832-65-1, LY-300164 **162011-90-7**, Rofecoxib 162054-19-5 163303-19-3 163303-25-1 163303-29-5 163303-38-6 163303-55-7 165251-89-8 165328-42-7 165328-49-4



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**177660-80-9** 177660-81-0 177660-85-4

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(combination therapy for amyotrophic lateral sclerosis treatment of  
 with COX-2 inhibitor and second drug)

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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(combination therapy for amyotrophic lateral sclerosis treatment of  
 with COX-2 inhibitor and second drug)

IT **59865-13-3**, Cyclosporine

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(combination therapy for amyotrophic lateral sclerosis treatment of  
with COX-2 inhibitor and second drug)

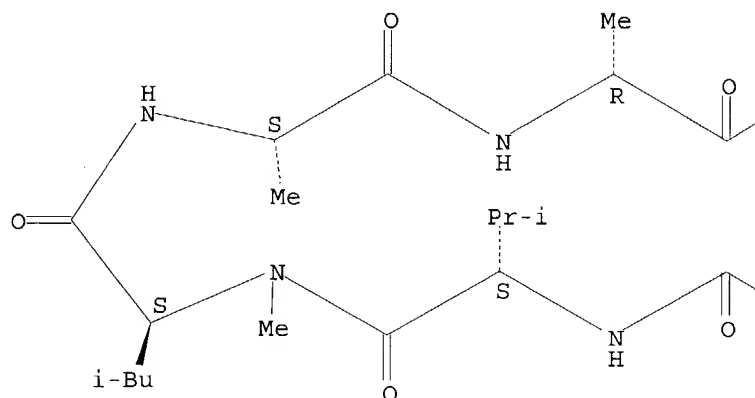
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

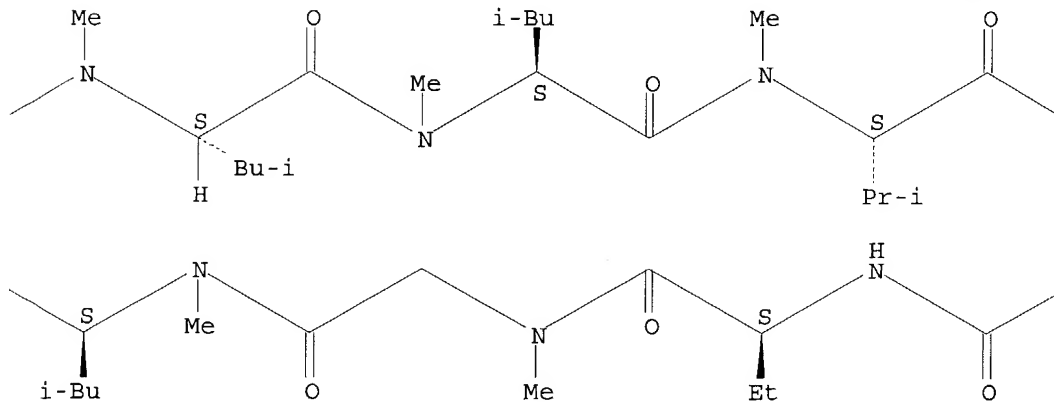
Absolute stereochemistry.

Double bond geometry as shown.

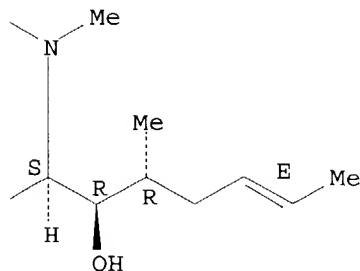
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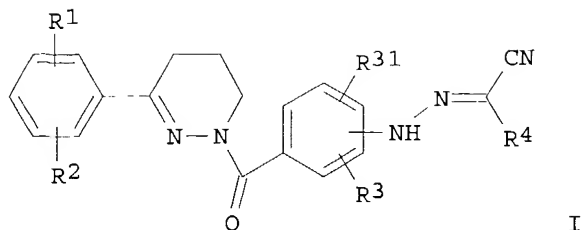
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 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (combination therapy for amyotrophic lateral sclerosis treatment of  
 with COX-2 inhibitor and second drug)

L199 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:376641 HCAPLUS  
 DOCUMENT NUMBER: 138:385438  
 TITLE: Preparation of pyridazinylmethanoylphenylhydrazonomalo  
 nitriles as phosphodiesterase IV inhibitors.  
 INVENTOR(S): Eggenweiler, Hans-Michael; Wolf, Michael; Beier,  
 Norbert; Schelling, Pierre; Ehring, Thomas  
 PATENT ASSIGNEE(S): Merck Patent Gmbh, Germany  
 SOURCE: PCT Int. Appl., 114 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039548	A1	20030515	WO 2002-EP11351	20021010
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: EP 2001-125455 A 20011105  
 OTHER SOURCE(S): MARPAT 138:385438

GI



AB Title compds. [I; R1, R2 = H, OH, OR5, SR5, SOR5, SO2R5, X; R1R2 = OCH2O, OCH2CH2O; R3, R31 = H, R5, OH, OR5, NH2, NHR5, NHCOR5, X, CO2H, CO2R5, CONH2, etc.; R4 = cyano, tetrazolyl; R5 = (fluoro-substituted) A, cycloalkyl, (CH2)nAr; A = (fluoro- and/or chloro-substituted) alkyl, alkenyl; Ar = Ph; n = 0-2; X = F, Cl, Br, iodo], were prepared Thus, [3-(3,4-diethoxyphenyl)-5,6-dihydro-4H-pyridazine-1-yl]-(3-aminophenyl)methanone (preparation given) was stirred with NaNO2 in aqueous

HCl for

1 h at -2° to 0°; malononitrile in H2O was added followed by stirring for 2 h to give a residue which was treated with KOH in MeOH to give 2-[3-[1-[3-(3,4-diethoxyphenyl)-5,6-dihydro-4H-pyridazin-1-yl]methanoyl]phenyl]hydrazono]malononitrile K salt. I were said to give a marked reduction of T cell proliferation. I are claimed for treatment of osteoporosis, tumors, cachexia, atherosclerosis, rheumatoid arthritis, multiple sclerosis, diabetes mellitus, inflammatory processes, allergies, asthma, autoimmune diseases, myocardial diseases, AIDS, etc.

IC ICM A61K031-50  
ICS C07D237-04

CC 28-15 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1

IT 50-24-8, Prednisolone 53-03-2, Prednisone 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfapyrazole 58-55-9, Theophylline, biological studies 59-05-2, Methotrexate 59-42-7, Phenylephrine 76-25-5, Triamcinolone acetone 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine 315-30-0, Allopurinol 317-34-0, Aminophylline 404-86-4, Capsaicin 446-86-6, Azathioprine 522-48-5, Tetrahydrozoline hydrochloride 550-99-2, Naphazoline hydrochloride 586-06-1, Metaproterenol 865-21-4, Vinblastine 1218-35-5, Xylometazoline hydrochloride 1397-89-3, Amphotericin b 2315-02-8, Oxymetazoline hydrochloride 3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromarone 5534-09-8, Beclomethasone dipropionate 7440-57-5D, Gold, aurothio compds. 7683-59-2, Isoproterenol 14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9, Albuterol 22254-24-6, Ipratropium bromide 22916-47-8, Miconazole 23031-25-6, Terbutaline 23593-75-1, Clotrimazole 27220-47-9, Econazole 28797-61-7, Pirenzepine 30286-75-0, Oxitropium bromide 30392-40-6, Bitolterol 38677-81-5, Pirbuterol 51333-22-3, Budesonide 58581-89-8, Azelastine 59865-13-3, Cyclosporine 65277-42-1, Ketoconazole 67763-96-6, IGF-1 68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide 79794-75-5, Loratidine 80474-14-2, Fluticasone propionate 80880-90-6, Telenzepine 83799-24-0, Fexofenadine 83869-56-1, GM-CSF 83881-51-0, Cetirizine 83919-23-7, Mometasone furoate 84625-61-6, Itraconazole 86386-73-4, Fluconazole 89365-50-4, Salmeterol 93211-49-5, L-651392 96566-25-5, Ablukast 100643-71-8, Desloratadine 103177-37-3, Pranlukast 103475-41-8, Tepoxalin

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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (coadministration; preparation of pyridazinylmethanoylphenylhydrazonomalonit  
 riles as phosphodiesterase IV inhibitors)

IT 59865-13-3, Cyclosporine

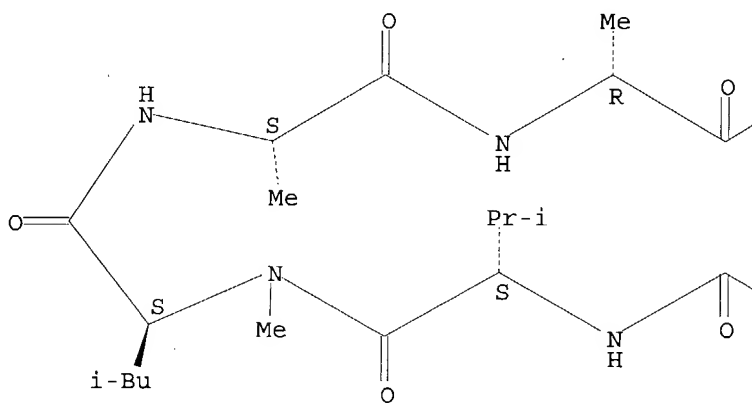
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
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 riles as phosphodiesterase IV inhibitors)

RN 59865-13-3 HCAPLUS

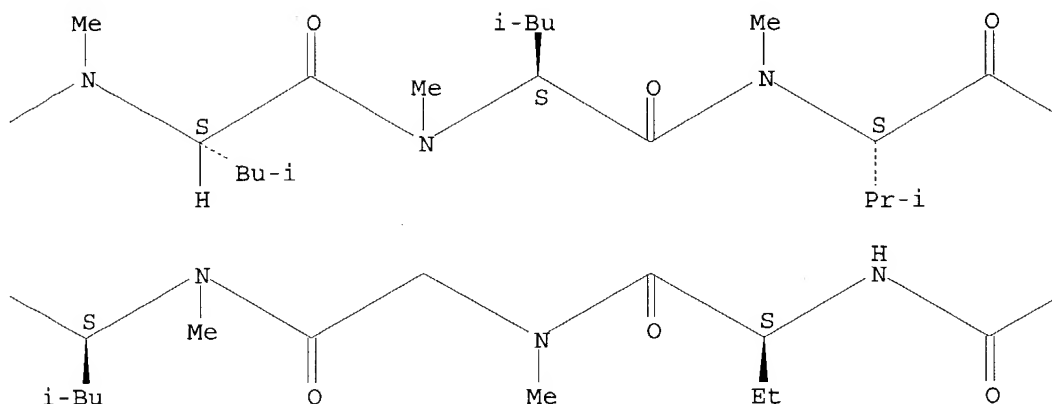
CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

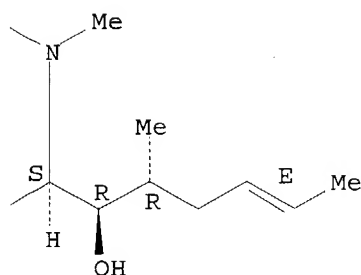
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IT 59865-13-3, Cyclosporine 93211-49-5, L-651392  
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 154355-76-7, Abt-761 158930-07-5, L-739010  
 162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (coadministration; preparation of pyridazinylmethanoylphenylhydrazonomalonit  
 riles as phosphodiesterase IV inhibitors)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:356269 HCAPLUS  
 DOCUMENT NUMBER: 138:348761  
 TITLE: Type 4 phosphodiesterase inhibitors and therapeutic  
 uses thereof  
 INVENTOR(S): Eggenweiler, Hans-Michael; Wolf, Michael  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 122 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003037349	A1	20030508	WO 2002-EP9596	20020828
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: EP 2001-125394 A 20011031

OTHER SOURCE(S): MARPAT 138:348761

AB The invention discloses the use of type 4 phosphodiesterase inhibitors (PDE IV inhibitors) to treat diseases, as well as combinations of PDE IV inhibitors with other drugs.

IC ICM A61K031-54

ICS A61K031-495; A61K031-50; A61P011-06; A61P017-06; A61P029-00; A61P037-00

CC 1-12 (Pharmacology)

IT 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfinpyrazone 59-05-2, Methotrexate 64-86-8, Colchicine 315-30-0, Allopurinol 446-86-6, Azathioprine 865-21-4, Vinblastine 3562-84-3, Benzbromarone 9004-08-4, Cathepsin **59865-13-3**, Cyclosporine 75706-12-6, Leflunomide 106096-93-9, Basic fibroblast growth factor 170277-31-3, Infliximab 185243-69-0, Etanercept 331731-18-1, D2E7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(msphosphodiesterase IV inhibitors, therapeutic uses, and use with other agents)

IT 113-92-8, Chloropheniramine 288-32-4D, Imidazole, derivs. 1397-89-3, Amphotericin B 1404-26-8, Polymyxin B 1406-11-7, Polymyxin 12633-72-6, Amphotericin 22916-47-8, Miconazole 23593-75-1, Clotrimazole 27220-47-9, Econazole 37306-44-8D, Triazole, derivs. 58581-89-8, Azelastine 65277-42-1, Ketoconazole 68844-77-9, Astemizole 79794-75-5, Loratadine 83799-24-0, Fexofenadine 83881-51-0, Cetirizine 84625-61-6, Itraconazole 86386-73-4, Fluconazole **93211-49-5**, L-651392 96566-25-5, Ablukast 100643-71-8, Desloratadine 103177-37-3, Pranlukast **103475-41-8**, Tepoxalin 107753-78-6, Zafirlukast **111406-87-2**, Zileuton **118414-82-7**, MK-886 120128-20-3, RG-12525 120443-16-5, Verlukast 125617-94-9, CGP 45715A **128253-31-6**, BAY x 1005 128312-51-6, Ro 24-5913 **140841-32-3**, ZD-2138 **141579-54-6**, Fenleuton **141579-87-5**, A 79175 143538-27-6, BAY x 7195 **147030-01-1**, MK-591 147398-01-4, CGS-25019c 147432-77-7, Ontazolast 149169-72-2 149169-73-3 151581-24-7, Iralkast **154355-76-7**, ; ABT-761 158841-09-9 158841-13-5 158841-15-7 158841-17-9 158841-18-0 158841-20-4 158841-22-6 158841-24-8 158841-26-0 158841-28-2 158841-30-6 158841-32-8 158841-35-1 158841-37-3 158841-38-4 158841-39-5 158841-41-9 158841-42-0 158841-43-1 **158930-07-5**, L-739010 158966-92-8, Montelukast 162750-10-9, SB-210661 168154-07-2, L-746530 180600-64-0 180600-67-3

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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(phosphodiesterase IV inhibitors, therapeutic uses, and use with other  
 agents)

IT 50-24-8, Prednisolone 53-03-2, Prednisone 58-55-9, Theophylline,  
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 Rofecoxib

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(sphosphodiesterase IV inhibitors, therapeutic uses, and use with other  
 agents)

IT 59865-13-3, Cyclosporine

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(msphosphodiesterase IV inhibitors, therapeutic uses, and use with  
 other agents)

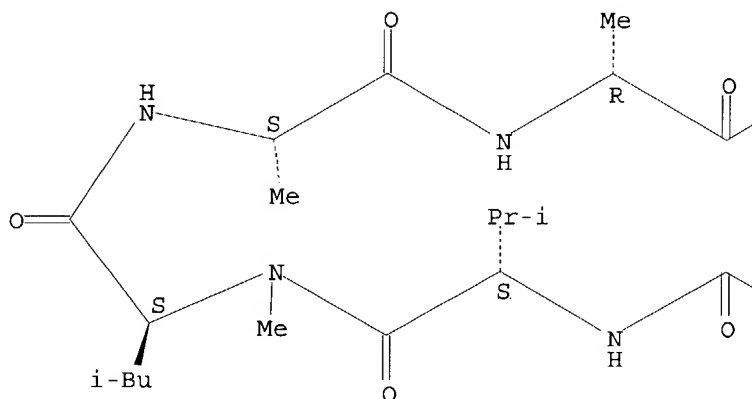
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

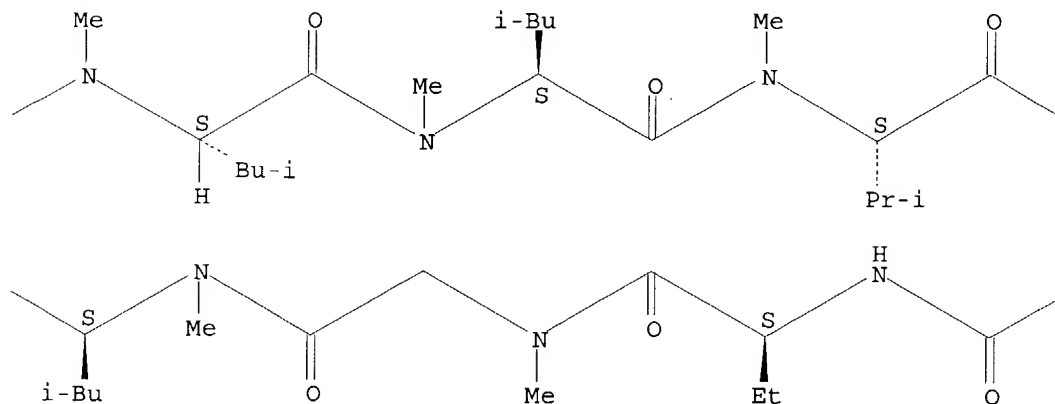
Absolute stereochemistry.

Double bond geometry as shown.

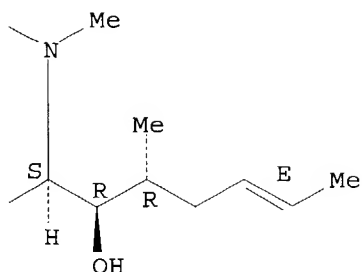
PAGE 1-A



PAGE 1-B



PAGE 1-C



IT 59865-13-3, Cyclosporine  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (msphosphodiesterase IV inhibitors, therapeutic uses, and use with  
 other agents)

IT 93211-49-5, L-651392 103475-41-8, Tepoxalin  
 111406-87-2, Zileuton 118414-82-7, MK-886  
 128253-31-6, BAY x 1005 140841-32-3, ZD-2138  
 141579-54-6, Fenleuton 141579-87-5, A 79175  
 147030-01-1, MK-591 154355-76-7, ; ABT-761  
 158930-07-5, L-739010  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (phosphodiesterase IV inhibitors, therapeutic uses, and use with other  
 agents)

IT 162011-90-7, Rofecoxib  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (sphosphodiesterase IV inhibitors, therapeutic uses, and use with other  
 agents)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:202410 HCAPLUS  
 DOCUMENT NUMBER: 138:226705  
 TITLE: Novel pharmaceuticals comprising drug conjugates with  
 polypeptide carriers  
 INVENTOR(S): Picariello, Thomas  
 PATENT ASSIGNEE(S): New River Pharmaceuticals Inc., USA  
 SOURCE: PCT Int. Appl., 2059 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 11  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003020200	A2	20030313	WO 2001-US43117	20011116

WO 2003020200 A3 20030912

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
 UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
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 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1357928 A2 20031105 EP 2001-273387 20011116

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:

US 2000-248600P P 20001116  
 US 2000-248601P P 20001116  
 US 2000-248603P P 20001116  
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 US 2001-248792P P 20011116  
 US 2001-248793P P 20011116  
 US 2001-248833P P 20011116  
 US 2001-248848P P 20011116  
 US 2001-248849P P 20011116  
 WO 2001-US43117 W 20011116

AB A pharmaceutical composition comprising a polypeptide and an active agent attached to said polypeptide is disclosed.

IC ICM A61K

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 2, 15

IT 50-06-6D, Phenobarbital, polypeptide conjugates 50-35-1D, Thalidomide, polypeptide conjugates 50-81-7D, Vitamin c, polypeptide conjugates 51-21-8D, Fluorouracil, polypeptide conjugates 51-48-9D, Levothyroxine, polypeptide conjugates 52-01-7D, Spironolactone, polypeptide conjugates 52-24-4D, Thiotepa, polypeptide conjugates 52-53-9D, Verapamil, polypeptide conjugates 53-03-2D, Prednisone, polypeptide conjugates 55-63-0D, Nitroglycerin, polypeptide conjugates 57-27-2D, Morphine, polypeptide conjugates 57-41-0D, Phenytoin, polypeptide conjugates 57-63-6D, Ethinyl estradiol, polypeptide conjugates 58-55-9D, Theophylline, polypeptide conjugates 58-93-5D, Hydrochlorothiazide, polypeptide conjugates 60-54-8D, Tetracycline, polypeptide conjugates 60-87-7D, Promethazine, polypeptide conjugates 67-20-9D, Nitrofurantoin, polypeptide conjugates 68-19-9D, Vitamin b12, polypeptide conjugates 68-22-4D, Norethindrone, polypeptide conjugates 71-58-9D, Medroxyprogesterone acetate, polypeptide conjugates 72-69-5D, Nortriptyline, polypeptide conjugates 74-79-3D, Arginine, polypeptide conjugates 76-42-6D, Oxycodone, polypeptide conjugates 76-57-3D, Codeine, polypeptide conjugates 81-81-2D, Warfarin, polypeptide conjugates 83-43-2D, Methylprednisolone, polypeptide conjugates 84-02-6D, Prochlorperazine maleate, polypeptide conjugates 87-08-1D, Penicillin v, polypeptide conjugates 89-57-6D, Mesalamine, polypeptide conjugates 90-82-4D, Pseudoephedrine, polypeptide conjugates 99-66-1D, Valproic acid, polypeptide conjugates 103-90-2D, Acetaminophen, polypeptide conjugates 113-45-1D, Methylphenidate, polypeptide conjugates 114-07-8D, Erythromycin, polypeptide conjugates 125-33-7D, Primidone, polypeptide conjugates 128-13-2D, Ursodiol, polypeptide conjugates 396-01-0D, Triamterene, polypeptide conjugates 443-48-1D, Metronidazole, polypeptide conjugates 469-62-5D, Propoxyphene, polypeptide conjugates 525-66-6D, Propranolol, polypeptide conjugates 541-15-1D, Levocarnitine, polypeptide conjugates 554-13-2D, Lithium

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 139639-23-9D, Tissue plasminogen activator, analogs, polypeptide  
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 144494-65-5D, Tirofiban, polypeptide conjugates 144980-29-0D, Repinotan,  
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 145941-26-0D, Oprelvekin, polypeptide conjugates 147059-75-4D,  
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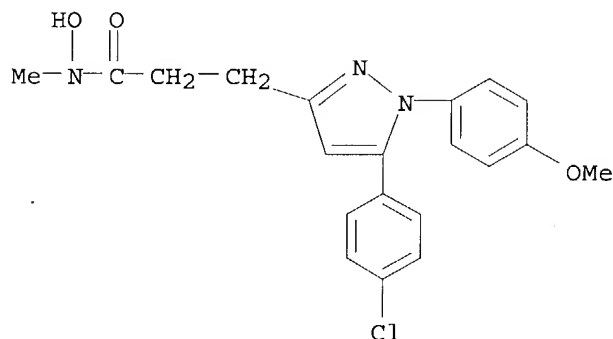
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(novel pharmaceuticals comprising drug conjugates with polypeptide carriers)

IT 103475-41-8D, Tepoxalin, polypeptide conjugates

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(novel pharmaceuticals comprising drug conjugates with polypeptide carriers)

RN 103475-41-8 HCAPLUS

CN 1H-Pyrazole-3-propanamide, 5-(4-chlorophenyl)-N-hydroxy-1-(4-methoxyphenyl)-N-methyl- (9CI) (CA INDEX NAME)



IT 103475-41-8D, Tepoxalin, polypeptide conjugates

121584-18-7D, Valspodar, polypeptide conjugates

162011-90-7D, Rofecoxib, polypeptide conjugates

181695-72-7D, Valdecoxib, polypeptide conjugates

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(novel pharmaceuticals comprising drug conjugates with polypeptide carriers)

L199 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:750331 HCAPLUS

DOCUMENT NUMBER: 139:62535

TITLE: Rate-Limited Steps of Human Oral Absorption and QSAR Studies

AUTHOR(S): Zhao, Yuan H.; Abraham, Michael H.; Le, Joelle; Hersey, Anne; Luscombe, Chris N.; Beck, Gordon; Sherborne, Brad; Cooper, Ian

CORPORATE SOURCE: Department of Chemistry, University College London, London, WC1H 0AJ, UK

SOURCE: Pharmaceutical Research (2002), 19(10), 1446-1457

CODEN: PHREEB; ISSN: 0724-8741

PUBLISHER: Kluwer Academic/Plenum Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Purpose. To classify the dissoln. and diffusion rate-limited drugs and establish quant. relationships between absorption and mol. descriptors. Methods. Absorption consists of kinetic transit processes in which dissoln., diffusion, or perfusion processes can become the rate-limited step. The absorption data of 238 drugs have been classified into either dissoln. or diffusion rate-limited based on an equilibrium method developed from solubility, dose, and percentage of absorption. A nonlinear absorption model derived from first-order kinetics has been developed to identify the relationship between percentage of drug absorption and mol. descriptors. Results. Regression anal. was performed between percentage of absorption and mol. descriptors. The descriptors used were ClogP, mol. polar surface area, the number of hydrogen-bonding acceptors and donors, and Abraham descriptors. Good relationships were found between absorption and Abraham descriptors or ClogP. Conclusions. The absorption models can predict the following three BCS (Biopharmaceutics Classification Scheme) classes of compds.: class I, high solubility and high permeability; class III, high solubility

and low permeability; class IV, low solubility and low permeability. The absorption models overpredict the absorption of class II, low solubility and high permeability compds. because dissoln. is the rate-limited step of absorption.

CC 1-2 (Pharmacology)

IT 50-02-2, Dexamethasone 50-22-6, Corticosterone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-47-5, Desipramine 50-49-7, Imipramine 50-78-2, Acetylsalicylic acid 50-81-7, Ascorbic acid, biological studies 51-34-3, Scopolamine 51-52-5, Propylthiouracil 51-55-8, Atropine 52-01-7, Spironolactone 52-53-9, Verapamil 53-86-1, Indomethacin 54-11-5, Nicotine 54-31-9, Furosemide 54-85-3, Isoniazid 56-40-6, Glycine, biological studies 56-54-2, Quinidine 56-75-7, Chloramphenicol 57-27-2, Morphine, biological studies 57-41-0, Phenytoin 57-63-6, Ethynylestradiol 57-83-0, Progesterone, biological studies 57-92-1, Streptomycin, biological studies 58-08-2, Caffeine, biological studies 58-15-1, Aminopyrine 58-22-0, Testosterone 58-55-9, Theophylline, biological studies 58-93-5, Hydrochlorothiazide 58-94-6, Chlorothiazide 59-05-2, Methotrexate 59-67-6, Nicotinic acid, biological studies 59-92-7, Levodopa, biological studies 60-80-0, Antipyrine 61-33-6, Benzylpenicillin, biological studies 61-75-6, Bretylium tosylate 64-77-7, Tolbutamide 68-41-7, Cycloserine 69-53-4, Ampicillin 69-65-8, Mannitol 69-72-7, Salicylic acid, biological studies 74-55-5, Ethambutol 76-57-3, Codeine 76-99-3, Methadone 81-07-2, Saccharin 81-81-2, Warfarin 83-43-2, Methylprednisolone 87-08-1, Phenoxymethylpenicillin 97-77-8, Disulfiram 99-66-1, Valproic acid 103-90-2, Acetaminophen 104-06-3, Thiacetazone 114-07-8, Erythromycin 125-28-0, Dihydrocodeine 154-21-2, Lincomycin 300-62-9, Amphetamine 427-51-0, Cyproterone acetate 439-14-5, Diazepam 465-65-6, Naloxone 508-77-0, Cymarin 512-69-6, Raffinose 525-66-6, Propranolol 555-30-6, Methyldopa 586-06-1, Metaproterenol 599-79-1, Sulfasalazine 604-75-1, Oxazepam 630-60-4, Ouabain 637-07-0, Clofibrate 657-24-9, Metformin 738-70-5, Trimethoprim 797-63-7, Levonorgestrel 848-75-9, Lormetazepam 1088-11-5, Nordiazepam 1156-05-4, Phenglutarimide 1197-18-8, Tranexamic acid 1225-20-3, Iothalamatesodium 1397-89-3, Amphotericin b 1404-04-2, Neomycin 1812-30-2, Bromazepam 2165-19-7, Guanoxan 2609-46-3, Amiloride 3056-17-5, Stavudine 3375-50-6, Mercaptoethanesulfonic acid 3930-20-9, Sotalol 4205-90-7, Clonidine 4428-95-9, Foscarnet 4618-18-2, Lactulose 5051-62-7, Guanabenz



6452-71-7, Oxprenolol 6673-35-4, Practolol 8063-07-8, Kanamycin  
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 15421-84-8, Trapidil 15676-16-1, Sulpiride 15686-71-2, Cephalexin  
 15687-27-1, Ibuprofen 15687-41-9, Oxyfedrine 15722-48-2, Olsalazine  
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 Bromocriptine 26787-78-0, Amoxicillin 26839-75-8, Timolol  
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 Amrinone 62571-86-2, Captopril 63590-64-7, Terazosin 63659-18-7,  
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 76963-41-2, Nizatidine 77181-69-2, Sorivudine 78110-38-0, Aztreonam  
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 97240-79-4, Topiramate 98048-97-6, Fosinopril 99614-02-5, Ondansetron  
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 Famciclovir 106941-25-7, Adefovir 109889-09-0, Granisetron  
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RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(rate-limited steps of human oral absorption and QSAR studies)

IT **59865-13-3**, Cyclosporin

RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

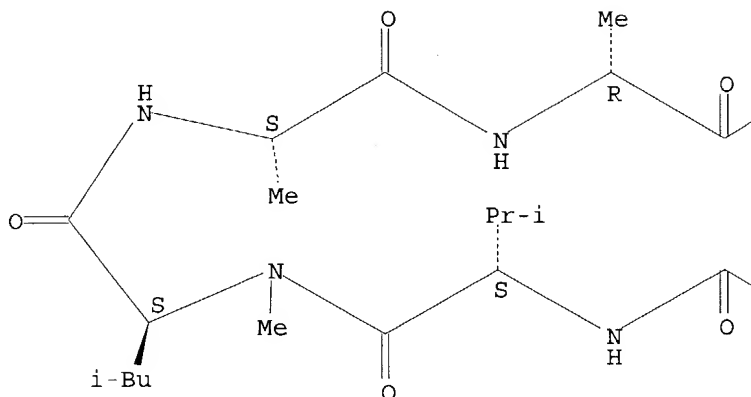
(rate-limited steps of human oral absorption and QSAR studies)

RN **59865-13-3** HCAPLUS

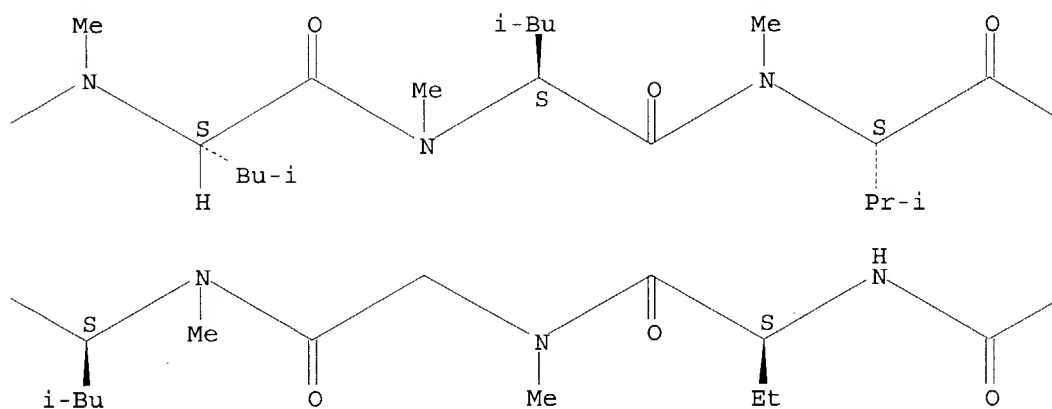
CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

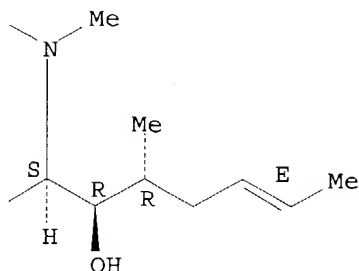
PAGE 1-A



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IT 59865-13-3, Cyclosporin 71125-38-7, Meloxicam

120210-48-2, Tenidap

RL: PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(rate-limited steps of human oral absorption and QSAR studies)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:594844 HCAPLUS

DOCUMENT NUMBER: 137:140518

TITLE: Preparation of thiazolyl-, oxazolyl-, pyrrolyl-, and imidazolyl- acid amide derivatives as inhibitors of phosphodiesterase IV isozymes

INVENTOR(S): Marfat, Anthony; McKechney, Michael William

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: PCT Int. Appl., 249 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

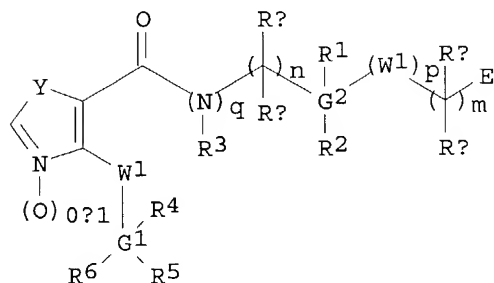
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

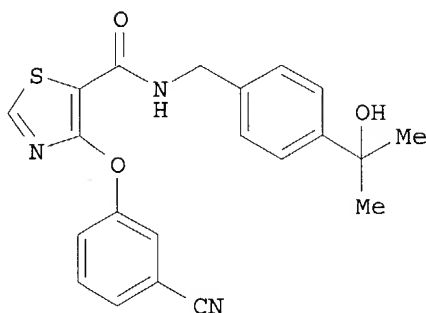
PATENT INFORMATION:

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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1355907	A1	20031029	EP 2001-273600	20011224
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EE 200300362	A	20031215	EE 2003-362	20011224
BR 2001016850	A	20040225	BR 2001-16850	20011224
JP 2004518691	T2	20040624	JP 2002-561466	20011224
US 2002123520	A1	20020905	US 2002-62145	20020131
US 6559168	B2	20030506		

US 2003130254 A1 20030710 US 2002-300959 20021120  
 US 2003186974 A1 20031002 US 2002-300950 20021120  
 NO 2003003398 A 20030929 NO 2003-3398 20030730  
 PRIORITY APPLN. INFO.: US 2001-265486P P 20010131  
 WO 2001-IB2728 W 20011224  
 US 2002-62145 A3 20020131  
 OTHER SOURCE(S): MARPAT 137:140518  
 GI



I



II

AB Title compds. I [wherein p = 0-1; q = 0-1; provided that when q = 0, n = 2; m = 0-3; n = 1-2; W1 and W2 = independently O, SO0-2, or NR3; or W2 = (un)substituted methylene; Y = SO0-2, O, NO0-1, NR3, or (un)substituted methylene; ; RA and RB = independently H, F, CF3, alkyl, or (un)substituted cycloalkyl, Ph, or benzyl; or when m = 1, CRARB = (un)substituted spiro; RC and RD have the same meaning as RA and RB except that one of them must be H; R1 and R2 = H, F, Cl, CN, NO2, (fluoro)alkyl, alkynyl, alkoxy, phenoxy, carbamoyl, etc.; R3 = H, alkyl, Ph, benzyl, alkoxy, phenoxy, etc.; R4, R5, and R6 = H, F, Cl, and (un)substituted (cyclo)alkyl, alkenyl, alkynyl, Ph, benzyl, pyridyl, alkoxy, phenoxy, acyl, carboxy, CN, NO2, carbamoyl, ureido, (hetero)aryl, etc.; G1 and G2 = independently (un)saturated carbocyclyl or heterocyclyl; E = (un)substituted carboxy, carbamoyl, acyl, hydroxyalkyl, cyanoalkyl, acylamino, ureido, amino, heterocyclyl, etc.] were prepared as inhibitors of PDE4 (no data). For example, 4-(3-cyanophenoxy)thiazole-5-carboxylic acid was treated with 2-(4-aminomethylphenyl)propan-2-ol in the presence of EDCI and HOBT in DMF to give the thiazolamide II. I are useful in the treatment of diseases regulated by the activation and degranulation of eosinophils, especially asthma, chronic bronchitis, and chronic obstructive pulmonary disease (no data). In addition, I may be used in combination therapy with a wide variety of

other therapeutic agents.

IC ICM C07D417-12  
ICS A61P011-06; A61P029-00; C07D277-56; A61K031-427

CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1

IT 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfinpyrazone  
58-55-9, Theophylline, biological studies 59-05-2, Methotrexate  
59-42-7, Phenylephrine 64-86-8, Colchicine 76-25-5, Triamcinolone  
acetone 90-82-4, Pseudoephedrine 91-22-5D, Quinoline, derivs.  
101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine 120-72-9D,  
Indole, derivs. 128-39-2D, 2,6-Di-tert-butylphenol, hydrazone derivs.  
315-30-0, Allopurinol 317-34-0, Aminophylline 404-86-4, Capsaicin  
446-86-6, Azathioprine 522-48-5, Tetrahydrozoline hydrochloride  
550-99-2, Naphazoline hydrochloride 581-30-6, 3H-Phenothiazin-3-one  
586-06-1, Orciprenaline 613-46-7D, 2-Cyanonaphthalene, pyridinyl derivs.  
865-21-4, Vinblastine 1218-35-5, Xylometazoline hydrochloride  
1436-43-7, 2-Cyanoquinoline 2315-02-8, Oxymetazoline hydrochloride  
3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromarone 5534-09-8,  
Beclomethasone dipropionate 6339-87-3D, 2-Thiophenesulfonamide, derivs.  
7440-57-5D, Gold, aurothio derivs. 7683-59-2, Isoprenaline 9004-08-4,  
Cathepsin 10102-43-9, Nitric oxide, biological studies 14838-15-4,  
Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9,  
Albuterol 22254-24-6, Ipratropium bromide 23031-25-6, Terbutaline  
30392-41-7, Bitolterol mesylate 38677-81-5, Pirbuterol 51333-22-3,  
Budesonide 58581-89-8, Azelastine **59865-13-3**, Cyclosporine  
68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide  
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Pranlukast **103475-41-8**, Tepoxalin 106096-93-9, Basic  
fibroblast growth factor 107753-78-6, Zafirlukast **111406-87-2**,  
Zileuton **118414-82-7**, MK-886 120128-20-3, RG-12525  
120443-16-5, Verlukast 126544-47-6, Ciclesonide **128253-31-6**,  
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7195 **147030-01-1**, MK-591 147398-01-4, CGS-25019c  
147432-77-7, Ontazolast 151581-24-7, Iralukast **154355-76-7**,  
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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy with PDE4 inhibitors; preparation of thiazolyl-,  
oxazolyl-, pyrrolyl-, and imidazolyl- acid amide derivs. as inhibitors  
of PDE4 isoenzymes)

IT **59865-13-3**, Cyclosporine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy with PDE4 inhibitors; preparation of thiazolyl-,  
oxazolyl-, pyrrolyl-, and imidazolyl- acid amide derivs. as inhibitors  
of PDE4 isoenzymes)

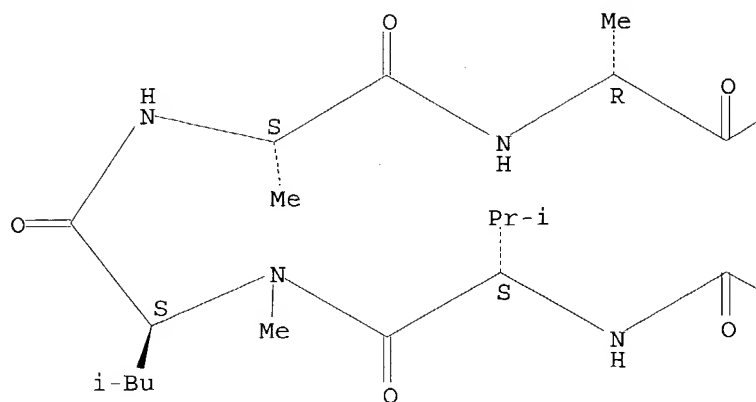
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

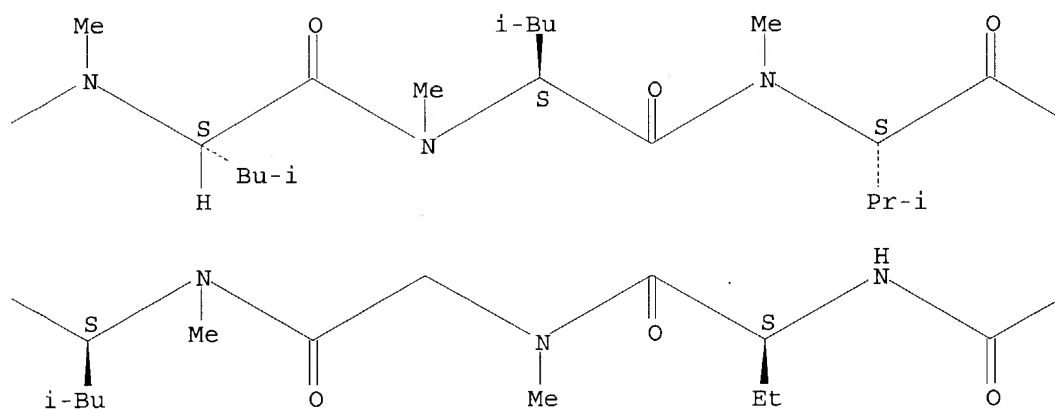
Absolute stereochemistry.

Double bond geometry as shown.

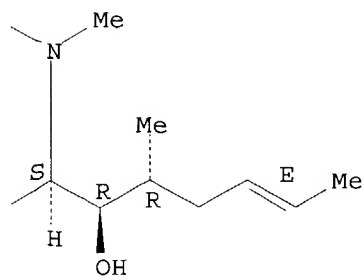
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IT 59865-13-3, Cyclosporine 93211-49-5, L-651392

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 (combination therapy with PDE4 inhibitors; preparation of thiazolyl-,  
 oxazolyl-, pyrrolyl-, and imidazolyl- acid amide derivs. as inhibitors  
 of PDE4 isoenzymes)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:594842 HCAPLUS

DOCUMENT NUMBER: 137:154859

TITLE: Preparation of carbamoyl-substituted pyridinyl aryl  
 ether derivatives as inhibitors of phosphodiesterase  
 IV isozymes

INVENTOR(S): Chambers, Robert James; Magee, Thomas Victor; Marfat,  
 Anthony

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: PCT Int. Appl., 285 pp.

CODEN: PIXXD2

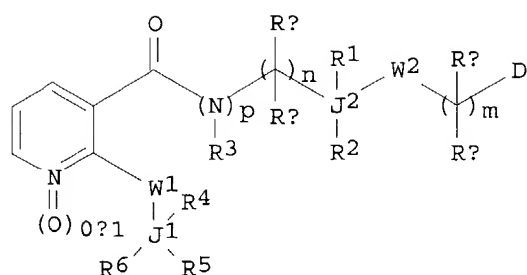
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LANGUAGE: English

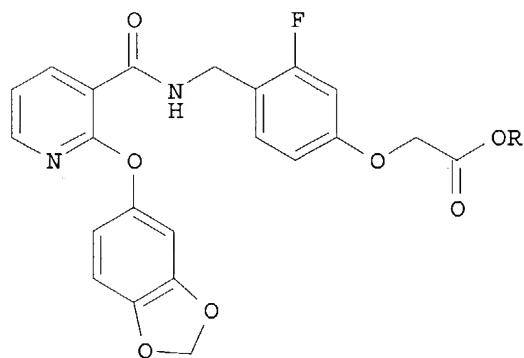
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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EE 200300361	A	20031215	EE 2003-361	20011224
EP 1373258	A1	20040102	EP 2001-273558	20011224
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BR 2001016845	A	20040225	BR 2001-16845	20011224
JP 2004518689	T2	20040624	JP 2002-561464	20011224
US 2003027845	A1	20030206	US 2002-66503	20020131
NO 2003003399	A	20030925	NO 2003-3399	20030730
PRIORITY APPLN. INFO.:			US 2001-265304P	P 20010131
			WO 2001-IB2726	W 20011224
OTHER SOURCE(S):	MARPAT 137:154859			
GI				



I



II

AB Title compds. compds. I [wherein p = 0-1, provided that when p = 0, n = 2; m = 1-3; n = 1-2; W1 and W2 = independently O, S(O)0-2, or NR3; Y = =C(R1a) or N(O)0-1; R1a = H, F, Cl, CN, NO2, (fluoro)alkyl, alkynyl, fluoroalkoxy, OR16, or (un)substituted carbamoyl; RA and RB = independently H, F, CF3, or (un)substituted (cyclo)alkyl, Ph, or benzyl; or CRARB = spiro moiety; RC and RD = the same as RA and RB except that one of them must be H; R1 and R2 = independently H, F, Cl, CN, NO2, (fluoro)alkyl, alkynyl, OR16, or (un)substituted carbamoyl; R3 = H, alkyl, Ph, benzyl, or OR16; R4, R5 and R6 = independently H, F, Cl, alkynyl, R16, OR16, SO0-2R16, COR16, CO2R16, OCOR16, CN, NO2, (un)substituted carbamoyl(oxy), ureido, carboximidoyl, aryl, heterocyclyl, etc.; or R5 and R6 taken together with the atoms to which they are attached = (hetero)cyclyl; J1 and J2 = independently (un)substituted, (un)saturated monocyclic or fused polycyclic ring; D = (un)substituted carboxy, carbamoyl, acyl, hydroxy(alkyl), cyano(alkyl), etc.; R16 = H or (un)substituted (cyclo)alkyl, alkenyl, Ph, benzyl, or pyridyl] were prepared as inhibitors of PDE4 (no data). For example, 2-(benzo[1,3]dioxol-5-yloxy)nicotinic acid was coupled with (4-aminomethyl-3-fluorophenoxy)acetic acid Me ester in the presence of 1-hydroxybenzotriazole•H2O and 1-[3-(dimethylamino)propyl]-3-ethylcarbodiimide•HCl in DMF/CH2Cl2 to give the pyridinecarboxamide II (R = Me) in 38% yield. Saponification using aqueous LiOH in THF and MeOH afforded the desired acid II (R = OH) in 21% yield. I are useful in the treatment of diseases regulated by the activation and degranulation of eosinophils, especially asthma, chronic bronchitis, and chronic obstructive pulmonary disease (no data). In addition, I may be used in combination therapy with a wide variety of other therapeutic agents.

IC ICM C07D405-12

ICS A61K031-44; A61P011-06; A61P029-00



CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 1

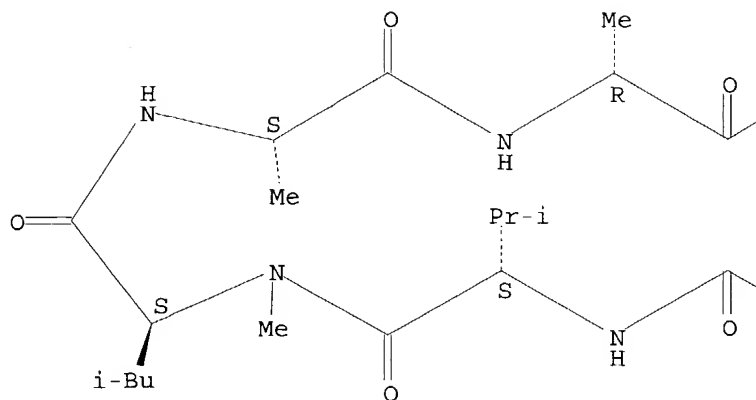
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biological studies 59-05-2, Methotrexate 59-42-7, Phenylephrine  
64-86-8, Colchicine 76-25-5, Triamcinolone acetonide 90-82-4,  
Pseudoephedrine 101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine  
128-39-2D, 2,6-Di-tert-butylphenol, hydrazone derivs. 315-30-0,  
Allopurinol 317-34-0, Aminophylline 404-86-4, Capsaicin 446-86-6,  
Azathioprine 522-48-5, Tetrahydrozoline hydrochloride 550-99-2,  
Naphazoline hydrochloride 586-06-1, Metaproterenol 865-21-4,  
Vinblastine 1218-35-5, Xylometazoline hydrochloride 2315-02-8,  
Oxymetazoline hydrochloride 3198-07-0 3385-03-3, Flunisolide  
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6339-87-3D, Thiophene-2-sulfonamide, derivs. 7440-57-5D, Gold, aurothio  
derivs. 7683-59-2, Isoproterenol 9004-08-4D, Cathepsin, derivs.  
14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate  
18559-94-9, Albuterol 22254-24-6, Ipratropium bromide 23031-25-6,  
Terbutaline 28797-61-7, Pirenzepine 30286-75-0, Oxitropium bromide  
30392-40-6, Bitolterol 38677-81-5, Pirbuterol 51333-22-3, Budesonide  
58581-89-8, Azelastine **59865-13-3**, Cyclosporine 68844-77-9,  
Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide  
79794-75-5, Loratadine 80474-14-2, Fluticasone propionate 80880-90-6,  
Telenzepine 83799-24-0, Fexofenadine 83869-56-1, Granulocyte-  
macrophage colony-stimulating factor 83881-51-0, Cetirizine  
83919-23-7, Mometasone furoate 89365-50-4, Salmeterol **93211-49-5**  
, L-651392 96566-25-5, Ablukast 100643-71-8, Desloratadine  
103177-37-3, Pranlukast **103475-41-8**, Tepoxalin 106096-93-9,  
Basic fibroblast growth factor 107753-78-6, Zafirlukast  
**111406-87-2**, Zileuton **118414-82-7**, MK-886 120128-20-3,  
RG-12525 120443-16-5, Verlukast 126544-47-6, Ciclesonide  
**128253-31-6**, BAY x 1005 128312-51-6 136310-93-5, Tiotropium  
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**141579-87-5** 143538-27-6, BAY x 7195 **147030-01-1**,  
MK-591 147398-01-4, CGS-25019c 147432-77-7, Ontazolast 151581-24-7,  
Iralukast **154355-76-7**, ABT-761 **158930-07-5**, L-739010  
158966-92-8, Montelukast **162011-90-7**, Rofecoxib 162750-10-9,  
SB-210661 168154-07-2, L-746530 170277-31-3, Infliximab 171964-73-1,  
ZD-0892 174636-32-9, Talnetant 185243-69-0, Etanercept 202415-99-4  
204974-93-6, BIIL 260 257892-34-5, D 4418 331731-18-1, D 2E7  
346735-24-8, BIIL 284 350610-64-9, NKP-608C 446023-33-2, UT 77  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy with PDE4 inhibitors; preparation of  
carbamoyl-substituted pyridinyl aryl ether derivs. as inhibitors of  
PDE4 isoenzymes)

IT **59865-13-3**, Cyclosporine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy with PDE4 inhibitors; preparation of  
carbamoyl-substituted pyridinyl aryl ether derivs. as inhibitors of  
PDE4 isoenzymes)

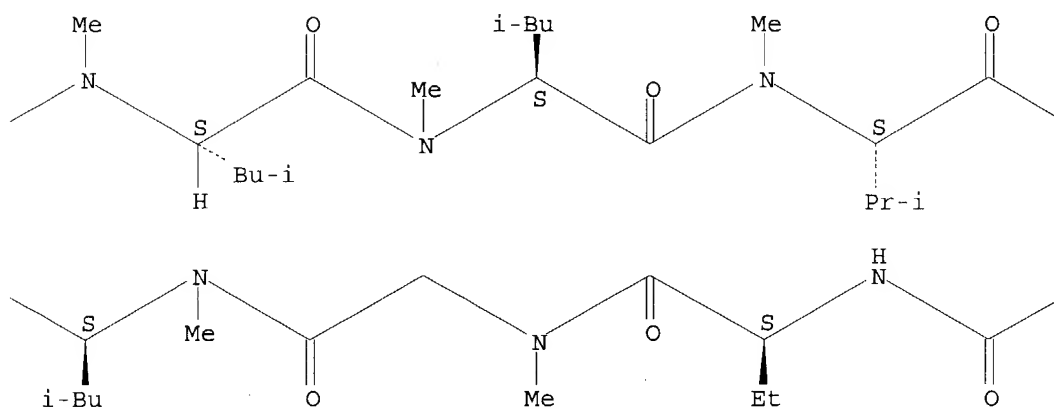
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CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

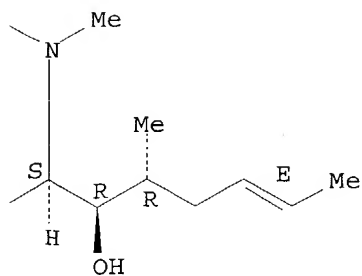
PAGE 1-A



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IT 59865-13-3, Cyclosporine 93211-49-5, L-651392

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140841-32-3 141579-54-6, Fenleuton 141579-87-5  
147030-01-1, MK-591 154355-76-7, ABT-761  
158930-07-5, L-739010 162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy with PDE4 inhibitors; preparation of  
carbamoyl-substituted pyridinyl aryl ether derivs. as inhibitors of  
PDE4 isoenzymes)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:594822 HCAPLUS

DOCUMENT NUMBER: 137:154857

TITLE: Preparation of nicotinamide biaryl derivatives as  
inhibitors of PDE4 isozymes

INVENTOR(S): Chambers, Robert James; Magee, Thomas Victor; Marfat,  
Anthony

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: PCT Int. Appl., 224 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002060875	A1	20020808	WO 2001-IB2341	20011206
WO 2002060875	C1	20030731		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1355884	A1	20031029	EP 2001-273556	20011206
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
EE 200300360	A	20031215	EE 2003-360	20011206
BR 2001016852	A	20040225	BR 2001-16852	20011206
JP 2004520386	T2	20040708	JP 2002-561026	20011206
US 2002193612	A1	20021219	US 2002-62813	20020131
US 6649633	B2	20031118		
US 2004048903	A1	20040311	US 2003-613988	20030702
NO 2003003397	A	20030919	NO 2003-3397	20030730
PRIORITY APPLN. INFO.:			US 2001-265492P	P 20010131
			WO 2001-IB2341	W 20011206
			US 2002-62813	A3 20020131

OTHER SOURCE(S): MARPAT 137:154857

GI

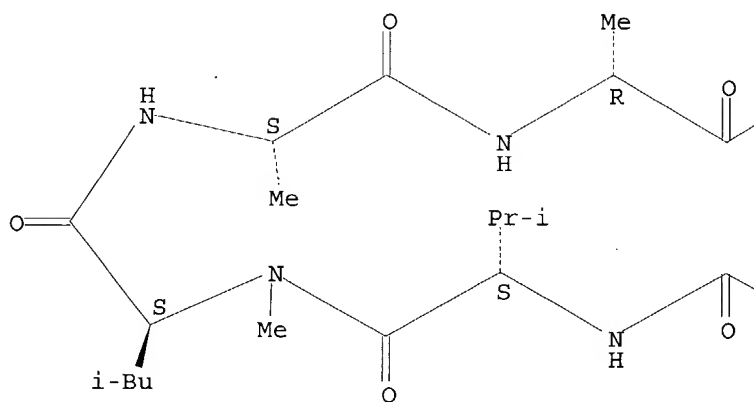
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

- AB The title compds. [I; g = 0-1; j = 0-1; provided that when j = 0, n must be 2; k = 0-1; m = 0-2; n = 1-2; W1 = 0, S0t (t = 0-2), NR3; W2 = OCR9R10, or absent; Y = CR1, NOK (k = 0-1); R9, R10 = H, F, CF3, etc.; or R9 and R10 are taken together, but only in the case where m = 1, to form a spiro moiety; R7, R8 have the same meaning as R9, R10 except that one of them must be H; R1, R2 = H, F, Cl, etc.; R3 = H, alkyl, Ph, etc.; R4-R6 = H, F, Cl, etc.; Q1 = Ph, benzodioxyl, etc.; Q2 = biaryl moiety], useful as inhibitors of PDE4 in the treatment of diseases regulated by the activation and degranulation of eosinophils, especially asthma, chronic bronchitis, and chronic obstructive pulmonary disease, were prepared E.g., a multi-step synthesis of the amide II, starting from Me 3-bromobenzoate and 4-formylbenzeneboronic acid, was given. Compds. I showed anti-inflammatory activity at 0.0001  $\mu$ M to 20.0  $\mu$ M in whole blood assay for LTE4.
- IC ICM C07D213-82  
ICS C07D405-12; A61K031-44; A61P011-06; A61P029-00
- CC 27-16 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 1, 10
- IT 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfinpyrazone 58-55-9, Theophylline, biological studies 59-05-2, Methotrexate 59-42-7, Phenylephrine 64-86-8, Colchicine 76-25-5, Triamcinolone acetone 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine 315-30-0, Allopurinol 317-34-0, Aminophylline 446-86-6, Azathioprine 522-48-5, Tetrahydrozoline hydrochloride 550-99-2, Naphazoline hydrochloride 586-06-1, Orciprenaline 865-21-4, Vinblastine 1218-35-5, Xylometazoline hydrochloride 1397-89-3, Amphotericin B 1404-26-8, Polymyxin B 2315-02-8, Oxymetazoline hydrochloride 3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromarone 5534-09-8, Beclomethasone dipropionate 7440-57-5D, Gold, derivs. 7683-59-2, Isoprenaline 9004-08-4, Cathepsin 14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9, Salbutamol 22254-24-6, Ipratropium bromide 22916-47-8, Miconazole 23031-25-6, Terbutaline 23593-75-1, Clotrimazole 27220-47-9, Econazole 30392-41-7, Bitolterol mesylate 38677-81-5, Pirbuterol 51333-22-3, Budesonide 58581-89-8, Azelastine **59865-13-3**, Cyclosporine 65277-42-1, Ketoconazole 68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide 79794-75-5, Loratadine 80474-14-2, Fluticasone propionate 83799-24-0, Fexofenadine 83881-51-0, Cetirizine 83919-23-7, Mometasone furoate 86386-73-4, Fluconazole 89365-50-4, Salmeterol **93211-49-5**, L-651392 96566-25-5, Ablukast 100643-71-8, Desloratadine 103177-37-3, Pranlukast **103475-41-8**, Tepoxalin 107753-78-6, Zafirlukast **111406-87-2**, Zileuton **118414-82-7**, MK-886 120128-20-3, RG-12525 120443-16-5, Verlukast 126544-47-6, Ciclesonide **128253-31-6**, BAY X 1005 **140841-32-3**, ZD 2138 **141579-54-6**, Fenleuton 143538-27-6, BAY x 7195 **147030-01-1**, MK-591 147398-01-4, CGS-25019c 147432-77-7, Ontazolast 151581-24-7, Iralukast **154355-76-7**, ABT-761 **158930-07-5**, L-739010 158966-92-8, Montelukast **162011-90-7**, Rofecoxib 162750-10-9, SB-210661 168154-07-2, L-746530 170277-31-3, Infliximab 185243-69-0, Etanercept 257892-34-5, D 4418 331731-18-1, D 2E7
- RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(in combination with; preparation of biaryl nicotinamides as inhibitors of PDE4 isoenzymes)
- IT **59865-13-3**, Cyclosporine  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(in combination with; preparation of biaryl nicotinamides as inhibitors of PDE4 isoenzymes)

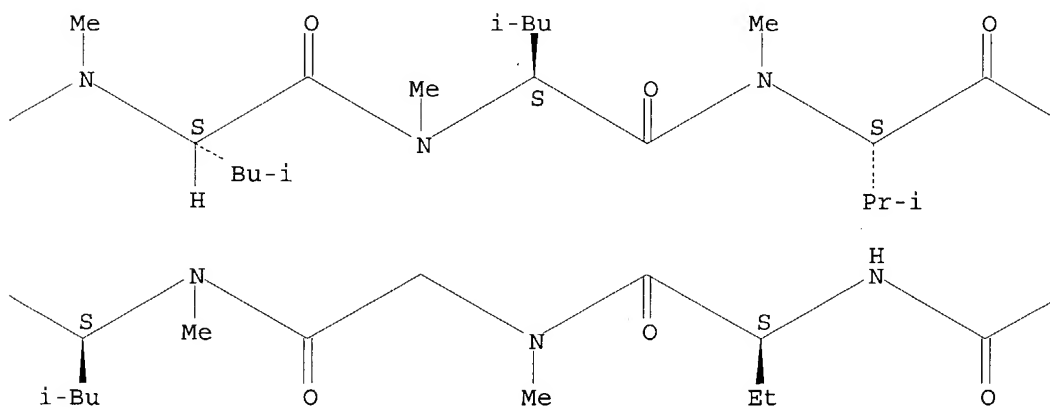
RN 59865-13-3 HCAPLUS  
CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

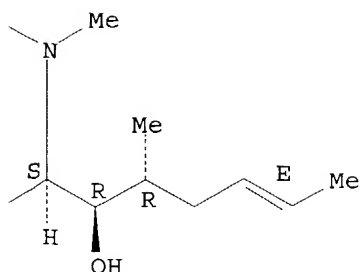
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IT 59865-13-3, Cyclosporine 93211-49-5, L-651392

103475-41-8, Tepoxalin 111406-87-2, Zileuton

118414-82-7, MK-886 128253-31-6, BAY X 1005

140841-32-3, ZD 2138 141579-54-6, Fenleuton

147030-01-1, MK-591 154355-76-7, ABT-761

158930-07-5, L-739010 162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(in combination with; preparation of biaryl nicotinamides as inhibitors of PDE4 isoenzymes)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:591707 HCAPLUS

DOCUMENT NUMBER: 137:140509

TITLE: Preparation of nicotinamides and mimetics as  
inhibitors of phosphodiesterase IV isozymes

INVENTOR(S): Chambers, Robert J.; Magee, Thomas V.; Marfat, Anthony

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: Eur. Pat. Appl., 180 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

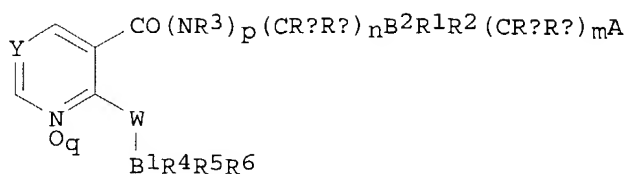
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1229034	A1	20020807	EP 2002-250202	20020111
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002111495	A1	20020815	US 2002-62811	20020131
BR 2002000250	A	20021008	BR 2002-250	20020131
PRIORITY APPLN. INFO.:			US 2001-265240P	P 20010131
			US 1997-43403P	P 19970404
			US 1998-105120P	P 19981021

OTHER SOURCE(S): MARPAT 137:140509

GI



- AB Title compds. [I; p, q = 0, 1; m = 0-2; n = 1, 2; A = CO2R7, CONR9CO2R7, CONR7R9, OP(O)(OH)2, SO3H, acylsulfonamido, etc.; W = O, S, SO, SO2, NR3; Y = N, NO, CR11; R1, R2 = H, F, Cl, cyano, NO2, alkyl, alkynyl, fluoroalkyl, etc.; R3 = H, alkyl, Ph, PhCH2, etc.; R4-R6 = H, F, Cl, alkynyl, cyano, NO2, etc.; R7 = H, (substituted) alkyl, alkenyl, alkynyl; R9 = H, alkyl, cycloalkyl, Ph, PhCH2, pyridyl, etc.; R11 = H, F, Cl, cyano, NO2, alkyl, alkynyl, fluoroalkyl, fluoroalkoxy, etc.; Ra, Rb = H, F, CF3, alkyl, (substituted) cycloalkyl, Ph, PhCH2; B1, B2 = 3-7 membered (hetero)cyclyl, 7-12 membered poly(hetero)cyclyl; pairs of variables may form rings; with provisos], were prepared (no data). Thus, Me 2-[4-[[[2-(benzo[1,3]dioxol-5-yloxy)pyridine-3-carbonyl]amino]methyl]phenyl]-2-methylpropionate was suspended in Me3COH. Aqueous NaOH was added to the suspension, and the reaction mixture was refluxed 1 h to give 2-[4-[[[2-(benzo[1,3]dioxol-5-yloxy)pyridine-3-carbonyl]amino]methyl]phenyl]-2-methylpropionic acid.
- IC ICM C07D401-12  
ICS C07D405-12; C07D405-14; C07D413-12; C07D213-64; A61K031-44; A61K031-455; A61P029-00; A61P037-08; A61P011-06
- CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1, 27
- IT 50-24-8, Prednisolone 57-22-7, Vincristin 57-66-9, Probenecid 57-96-5, Sulfinpyrazone 58-55-9, Theophylline, biological studies 59-42-7, Phenylephrine 64-86-8, Colchicine 76-25-5, Triamcinolone acetone 84-22-0, Tetrahydrozoline 90-82-4, Pseudoephedrine 101-40-6, Propylhexedrine 113-92-8, Chlorpheniramine 315-30-0, Allopurinol 317-34-0, Aminophyllin 404-86-4, Capsaicin 586-06-1, Orciprenaline 835-31-4, Naphazoline 865-21-4, Vinblastine 1218-35-5, Xylometazoline hydrochloride 1397-89-3, Amphotericin b 1404-26-8, Polymyxin B 1491-59-4, Oxymetazoline 3198-07-0 3385-03-3, Flunisolide 3562-84-3, Benzbromarone 5534-09-8, Beclomethasone dipropionate 7440-57-5D, Gold, aurothio compds. 7683-59-2, Isoproterenol 14838-15-4, Phenylpropanolamine 15826-37-6, Sodium cromoglycate 18559-94-9, Albuterol 22916-47-8, Miconazole 23031-25-6, Terbutaline 23593-75-1, Clotrimazole 27220-47-9, Econazole 28797-61-7, Pirenzepine 30286-75-0, Oxitropium bromide 30392-40-6, Bitolterol 38677-81-5, Pirbuterol 51333-22-3, Budesonide 58581-89-8, Azelastine 59865-13-3, Cyclosporine 60205-81-4, Ipratropium 65277-42-1, Ketoconazole 68844-77-9, Astemizole 73573-87-2, Formoterol 75706-12-6, Leflunomide 79794-75-5, Loratidine 80880-90-6, Telenzepine 83799-24-0, Fexofenadine 83869-56-1, Granulocyte macrophage colony stimulating factor 83881-51-0, Cetirizine 83919-23-7, Mometasone furoate 86386-73-4, Fluconazole 89365-50-4, Salmeterol 90566-53-3, Fluticasone 93211-49-5, L-651392 100643-71-8, Desloratadine 103177-37-3, Pranlukast 103475-41-8, Tepoxalin 106096-93-9, Basic fibroblast growth factor 107753-78-6, Zafirlukast 111406-87-2, Zileuton 118414-82-7, Mk-886 120128-20-3, RG-12525 120443-16-5, Verlukast 126544-47-6, Ciclesonide 128253-31-6, BAY x 1005 136310-93-5, Tiotropium bromide 140841-32-3, ZD-2138 141579-54-6, Fenleuton 141579-87-5, A 79175 143538-27-6, BAY x 7195 147030-01-1

, Mk-591 147398-01-4, CGS-25019c 147432-77-7, Ontazolast  
 151581-24-7, Iralukast **154355-76-7**, ABT-761 **158930-07-5**  
 , L-739010 158966-92-8, Montelukast **162011-90-7**, Rofecoxib  
 162750-10-9, SB-210661 168154-07-2, L-746530 170277-31-3, Infliximab  
 171964-73-1, Zd-0892 174636-32-9, Talnetant 185243-69-0, Etanercept  
 204974-93-6, BIIL 260 257892-34-5, D 4418 331731-18-1, D 2E7  
 346735-24-8, BIIL 284 350610-64-9, Nkp-608c 411267-65-7

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (combination therapy; preparation of nicotinamides and mimetics as  
 inhibitors of phosphodiesterase IV isoenzymes)

IT **59865-13-3**, Cyclosporine

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (combination therapy; preparation of nicotinamides and mimetics as  
 inhibitors of phosphodiesterase IV isoenzymes)

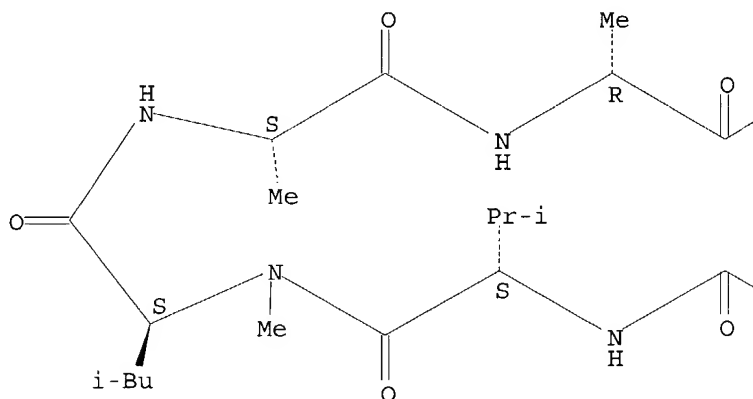
RN 59865-13-3 HCAPLUS

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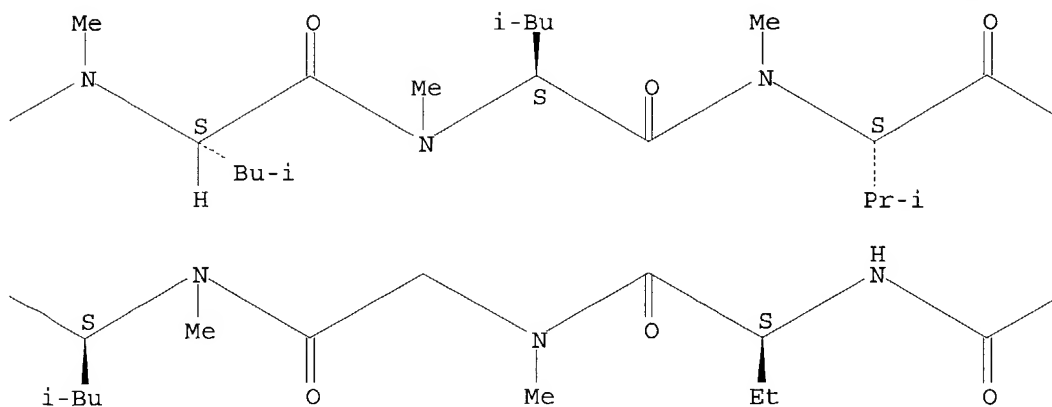
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A

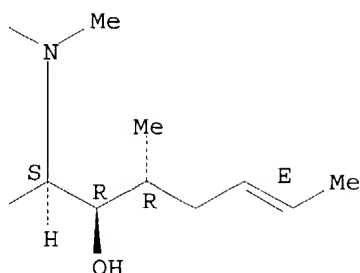


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PAGE 1-C



IT 59865-13-3, Cyclosporine 93211-49-5, L-651392  
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 118414-82-7, Mk-886 128253-31-6, BAY x 1005  
 140841-32-3, ZD-2138 141579-54-6, Fenleuton  
 141579-87-5, A 79175 147030-01-1, Mk-591  
 154355-76-7, ABT-761 158930-07-5, L-739010  
 162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (combination therapy; preparation of nicotinamides and mimetics as  
 inhibitors of phosphodiesterase IV isoenzymes)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:556104 HCAPLUS

DOCUMENT NUMBER: 137:109489

TITLE: Compositions comprising a polypeptide and an active  
 agent

INVENTOR(S): Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randal  
 J.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 34 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 11

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002099013	A1	20020725	US 2001-933708	20010822
US 2004087483	A1	20040506	US 2002-136433	20020502
PRIORITY APPLN. INFO.:			US 2000-247556P	P 20001114
			US 2000-247558P	P 20001114
			US 2000-247559P	P 20001114
			US 2000-247560P	P 20001114
			US 2000-247561P	P 20001114
			US 2000-247594P	P 20001114
			US 2000-247595P	P 20001114
			US 2000-247606P	P 20001114
			US 2000-247607P	P 20001114
			US 2000-247608P	P 20001114

US 2000-247609P P 20001114  
 US 2000-247610P P 20001114  
 US 2000-247611P P 20001114  
 US 2000-247612P P 20001114  
 US 2000-247620P P 20001114  
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 US 2000-247926P P 20001114  
 US 2000-247927P P 20001114  
 US 2000-247928P P 20001114  
 US 2000-247929P P 20001114  
 US 2000-247930P P 20001114  
 US 2000-642820 A2 20000822  
 US 2000-248607P P 20001116  
 US 2001-933708 A2 20010822

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalixin hydrochloride.

IC ICM A61K038-17

NCL 514012000

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1, 63

IT 50-06-6, Phenobarbital, biological studies 50-18-0, Cyclophosphamide  
 50-35-1, Thalidomide 50-44-2, Mercaptopurine 50-78-2, Acetylsalicylic  
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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comps. comprising a polypeptide and an active agent)

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 sulfate 188627-80-7, Eptifibatide 189013-61-4, 4030W92 192329-42-3,

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 BMS 284756

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (compns. comprising a polypeptide and an active agent)

IT 59865-13-3, Cyclosporin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (compns. comprising a polypeptide and an active agent)

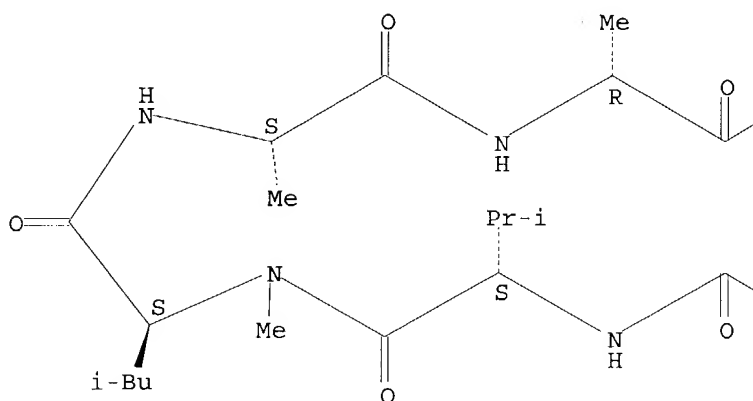
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CN Cyclosporin A (9CI) (CA INDEX NAME)

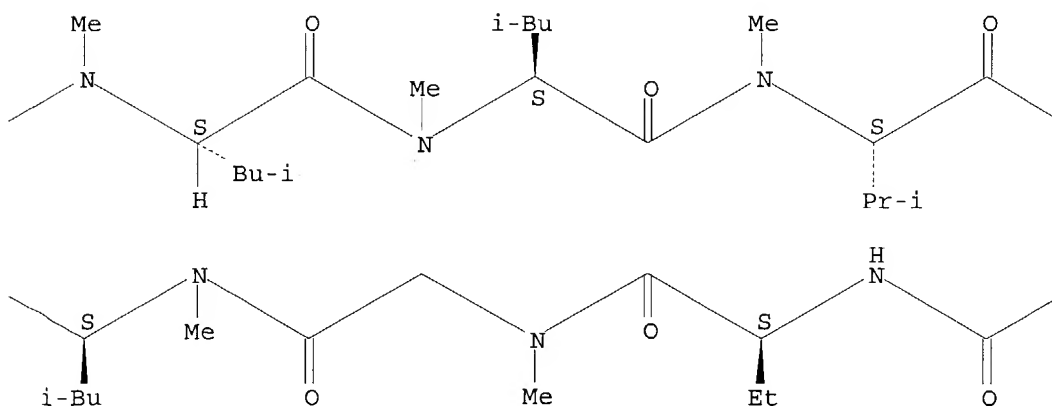
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Double bond geometry as shown.

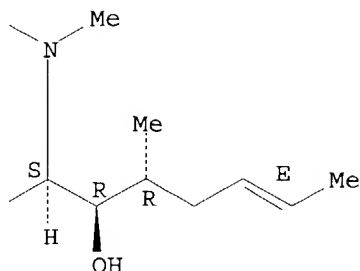
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IT 59865-13-3, Cyclosporin 103475-41-8, Tepoxalin  
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 162011-90-7, Rofecoxib 181695-72-7, Valdecoxib  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (compns. comprising a polypeptide and an active agent)

L199 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:332011 HCAPLUS

DOCUMENT NUMBER: 136:355482

TITLE: Compositions comprising a polypeptide and an active agent

INVENTOR(S): Piccariello, Thomas; Olon, Lawrence P.; Kirk, Randall J.

PATENT ASSIGNEE(S): New River Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 11

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002034237	A1	20020502	WO 2001-US26142	20010822
W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
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AU 2001086599	A5	20020506	AU 2001-86599	20010822
EP 1311242	A1	20030521	EP 2001-966056	20010822
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US 2004127397	A1	20040701	US 2003-727565	20031205
PRIORITY APPLN. INFO.:			US 2000-642820 A	20000822
			WO 2001-US26142 W	20010822

AB Claimed are compns. comprising a polypeptide and an active agent covalently attached to the polypeptide and a method for delivery of an

active agent to a patient by administering the composition to the patient. The peptide is a homopolymer of a naturally occurring amino acid or a heteropolymer of two or more naturally occurring amino acids. In an example, (Glu)n-cephalexin was prepared from Glu(OBut)NCA and cephalixin hydrochloride.

IC ICM A61K009-14  
ICS A61K009-22; A61K009-50; A61K047-42; C07K001-02; C07K001-13  
CC 34-3 (Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 1, 63  
IT 50-06-6, Phenobarbital, biological studies 50-18-0, Cyclophosphamide  
50-35-1, Thalidomide 50-44-2, Mercaptopurine 50-78-2, Acetylsalicylic  
acid 50-81-7, Vitamin C, biological studies 51-21-8, Fluorouracil  
51-61-6, Dopamine, biological studies 51-63-8, Dextroamphetamine sulfate  
51-98-9, Norethindrone acetate 52-01-7, Spironolactone 52-24-4,  
Thiotepa 52-86-8, Haloperidol 53-36-1, Methylprednisolone Acetate  
54-31-9, Furosemide 55-63-0, Nitroglycerin 57-63-6, Ethinyl estradiol  
58-08-2, Caffeine, biological studies 58-18-4, Methyltestosterone  
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466-99-9, Hydromorphone 469-62-5, Propoxyphene 509-60-4,  
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1951-25-3, Amiodarone 2078-54-8, Propofol 2152-34-3, Pemoline  
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Orphenadrine citrate 4759-48-2, Isotretinoin 5786-21-0, Clozapine  
6202-23-9, Cyclobenzaprine hydrochloride 6493-05-6, Pentoxifylline  
6533-00-2, Norgestrel 7280-37-7, Estropipate 7414-83-7, Etidronate  
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9002-69-1, Relaxin 9005-49-6, Heparin, biological studies 9014-42-0,  
Thrombopoietin 9039-53-6, Urokinase 9041-08-1, Dalteparin sodium  
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sulfonate 10238-21-8, Glyburide 11005-12-2,  $\beta$ -Phytosterol



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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comps. comprising a polypeptide and an active agent)

IT 74356-00-6, Cefotetan disodium 74381-53-6, Leuprolide acetate 74469-00-4, Amoxicillin-potassium clavulanate mixture 75330-75-5, Lovastatin 75695-93-1, Isradipine 75706-12-6, Leflunomide 75847-73-3, Enalapril 75970-99-9, Norastemizole 76470-66-1, Loracarbef 76547-98-3, Lisinopril 76584-70-8, Divalproex sodium 76820-74-1, Sodium meglumine ioxaglate 76824-35-6, Famotidine 76963-41-2, Nizatidine 78246-49-8, Paroxetine hydrochloride 78628-80-5, Terbinafine hydrochloride 78755-81-4, Flumazenil 79307-93-0, Azelastine hydrochloride 79350-37-1, Cefixime 79517-01-4, Octreotide

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 dihydrochloride 106266-06-2, Risperidone 106392-12-5, Poloxamer 188  
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 133737-32-3, Pagoclone 134523-03-8, Atorvastatin calcium 134564-82-2,  
 Befloxatone 134678-17-4, Lamivudine 135062-02-1, Repaglinide  
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Interferon  $\beta$ 1 (human fibroblast protein moiety) 145375-43-5,  
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 Oprelvekin 146479-72-3 147059-75-4, Trovafloxacin mesylate  
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 Pregabalin 148883-56-1, Tifacogin 149824-15-7, Ilodecakin  
 149845-06-7, Saquinavir mesylate 149950-60-7, Emivirine 151035-56-2  
 151063-30-8, Lisinopril-hydrochlorothiazide mixture 151319-34-5, Zaleplon  
 151767-02-1, Montelukast sodium 152751-57-0, Sevelamer hydrochloride  
 153168-05-9, Pleconaril 153259-65-5, Cilomilast 153438-49-4, Dapitant  
 153439-40-8, Fexofenadine hydrochloride 153773-82-1, MK 826  
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 166518-60-1, Avasimibe 169148-63-4, NN 304 169590-42-5, Celecoxib  
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 Sildenafil citrate 178961-24-5, 264W94 179120-92-4, Altinicline  
 180288-69-1, Trastuzumab 181069-80-7, ALT 711 **181695-72-7**,  
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 Prinomastat 193079-69-5, Tabimorelin 198153-51-4, Peginterferon  
 alfa-2a 198283-73-7, ABT 594 202138-50-9, Tenofovir disoproxil  
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 FK 463 210101-16-9, Conivaptan 213252-14-3, BMS 188667 223652-82-2,  
 BMS 284756

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (compns. comprising a polypeptide and an active agent)

IT **59865-13-3**, Cyclosporin

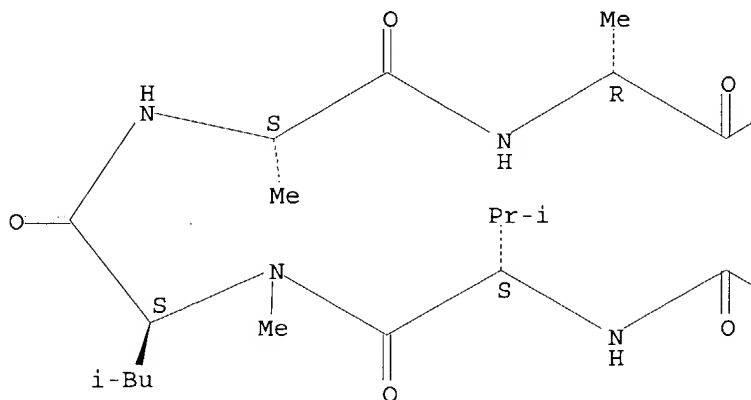
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 (compns. comprising a polypeptide and an active agent)

RN 59865-13-3 HCAPLUS

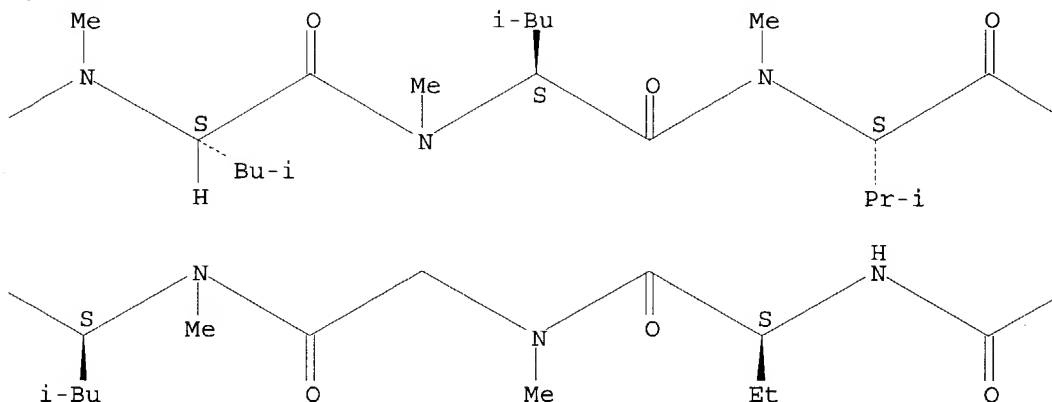
CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

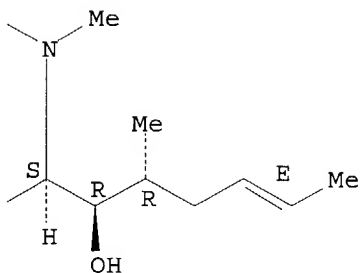
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IT 59865-13-3, Cyclosporin 103475-41-8, Tepoxalin

121584-18-7, Valspodar 141579-67-1, A 78773

162011-90-7, Rofecoxib 181695-72-7, Valdecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(comps. comprising a polypeptide and an active agent)

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RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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DOCUMENT NUMBER: 138:378518

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subsequent derivation of a quantitative  
structure-activity relationship (QSAR) with the  
Abraham descriptors. [Erratum to document cited in  
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AUTHOR(S): Zhao, Yuan H.; Le, Joelle; Abraham, Michael H.;  
Hersey, Anne; Eddershaw, Peter J.; Luscombe, Chris N.;  
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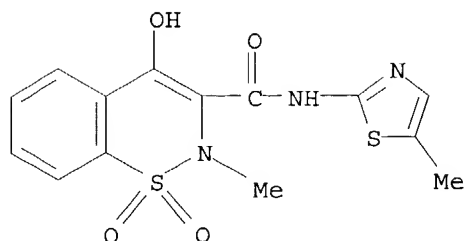
LANGUAGE: English

AB The name of author Darko Butina was misspelled as Boutina. This article has recently been awarded the Ebert Prize, given by the APhA for the best paper published in J. Pharm. Sci. in the previous year. The Ebert Prize, one of the top prizes given by the APhA each year, dates approx. from the year 1870.

CC 1-3 (Pharmacology)

IT 50-02-2, Dexamethasone 50-22-6, Corticosterone 50-23-7, Hydrocortisone 50-24-8, Prednisolone 50-47-5, Desipramine 50-49-7, Imipramine 50-78-2, Acetylsalicylic acid 50-81-7, Ascorbic acid, biological studies 51-34-3, Scopolamine 51-52-5, Propylthiouracil 51-55-8, Atropine 52-01-7, Spironolactone 52-53-9, Verapamil 53-86-1, Indomethacin 54-11-5, Nicotine 54-31-9, Furosemide 54-85-3, Isoniazid 56-40-6, Glycine, biological studies 56-54-2, Quinidine 56-75-7, Chloramphenicol 57-27-2, Morphine, biological studies 57-41-0, Phenytoin 57-63-6, Ethinylestradiol 57-83-0, Progesterone, biological studies 57-92-1, Streptomycin, biological studies 58-08-2, Caffeine, biological studies 58-15-1, Aminopyrine 58-22-0, Testosterone 58-55-9, Theophylline, biological studies 58-93-5, Hydrochlorothiazide 58-94-6, Chlorothiazide 59-05-2, Methotrexate 59-67-6, Nicotinic acid, biological studies 59-92-7, Levodopa, biological studies 60-80-0, Antipyrine 61-33-6, Benzylpenicillin, biological studies 61-75-6, Bretylium tosylate 64-77-7, Tolbutamide 68-41-7, Cycloserine 69-53-4, Ampicillin 69-65-8, Mannitol 69-72-7, Salicylic acid, biological studies 74-55-5, Ethambutol 76-57-3, Codeine 76-99-3, Methadone 81-07-2, Saccharin 81-81-2, Warfarin 83-43-2, Methylprednisolone 87-08-1, Phenoxymethylpenicillin 97-77-8, Disulfiram 99-66-1, Valproic acid 103-90-2, Acetaminophen 104-06-3, Thiacetazone 114-07-8, Erythromycin 125-28-0, Dihydrocodeine 154-21-2, Lincomycin 300-62-9, Amphetamine 427-51-0, Cyproterone acetate 439-14-5, Diazepam 465-65-6, Naloxone 508-77-0, Cymarin 512-69-6, Raffinose 525-66-6, Propranolol 555-30-6, Methyldopa 586-06-1, Metaproterenol 599-79-1, Sulfasalazine 604-75-1, Oxazepam 630-60-4, Ouabain 637-07-0, Clofibrate 657-24-9, Metformin 738-70-5, Trimethoprim 797-63-7, Levonorgestrel 848-75-9, Lormetazepam 1088-11-5, Nordiazepam 1156-05-4, Phenglutarimide 1197-18-8, Tranexamic acid 1225-20-3, Iothalamate sodium 1397-89-3, Amphotericin B 1404-04-2, Neomycin 1812-30-2, Bromazepam 2165-19-7, Guanoxan 2609-46-3, Amiloride 3056-17-5, Stavudine 3375-50-6, Mercaptoethanesulfonic acid 3930-20-9, Sotalol 4205-90-7, Clonidine 4428-95-9, Foscarnet 4618-18-2, Lactulose 5051-62-7, Guanabenz 6452-71-7, Oxprenolol 6673-35-4, Practolol 8063-07-8, Kanamycin 10238-21-8, Glyburide 11003-38-6, Capreomycin 13392-18-2, Fenoterol 13523-86-9, Pindolol 13655-52-2, Alprenolol 15307-86-5, Diclofenac 15421-84-8, Trapidil 15676-16-1, Sulpiride 15686-71-2, Cephalixin 15687-27-1, Ibuprofen 15687-41-9, Oxfedrine 15722-48-2, Olsalazine 15826-37-6, Cromolyn sodium 15876-67-2, Distigmine bromide 16662-47-8, Gallopamil 17560-51-9, Metolazone 19216-56-9, Prazosin 20448-86-6, Bornaprine 20830-75-5, Digoxin 21187-98-4, Gliclazide 22071-15-4, Ketoprofen 22204-53-1, Naproxen 23031-25-6, Terbutaline 23155-02-4, Fosfomycin 23214-92-8, Doxorubicin 25451-15-4, Felbamate 25614-03-3, Bromocriptine 25876-10-2, Gentamicin-C1 26787-78-0, Amoxicillin 26839-75-8, Timolol 27025-49-6, Carfecillin 27203-92-5, Tramadol 27589-33-9, Azosemide 28395-03-1, Bumetanide 28981-97-7, Alprazolam 29122-68-7, Atenolol 30516-87-1, Zidovudine 31828-71-4, Mexiletine

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 68401-81-0, Ceftizoxime 68506-86-5, Vigabatrin 70052-12-9,  
 Eflornithine 70374-39-9, Lornoxicam 70458-92-3, Pefloxacin  
 70458-96-7, Norfloxacin **71125-38-7**, Meloxicam 72509-76-3,  
 Felodipine 73384-59-5, Ceftriaxone 73590-58-6, Omeprazole  
 74103-06-3, Ketorolac 74738-24-2, Recainam 75330-75-5, Lovastatin  
 75438-57-2, Moxonidine 75695-93-1, Isradipine 75847-73-3, Enalapril  
 75949-61-0, Pafenolol 76420-72-9, Enalaprilat 76470-66-1, Loracarbef  
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 76963-41-2, Nizatidine 77181-69-2, Sorivudine 78110-38-0, Aztreonam  
 78755-81-4, Flumazenil **79217-60-0**, Cyclosporin 81093-37-0,  
 Pravastatin 81098-60-4, Cisapride 81801-12-9, Xamoterol 82410-32-0,  
 Ganciclovir 82419-36-1, Ofloxacin 83366-66-9, Nefazodone 83905-01-5,  
 Azithromycin 84057-84-1, Lamotrigine 84490-12-0, Piroximone  
 84558-93-0, Netivudine 85721-33-1, Ciprofloxacin 86386-73-4,  
 Fluconazole 86541-75-5, Benazepril 87848-99-5, Acrivastine  
 89778-26-7, Toremfene 93413-69-5, Venlafaxine 93957-54-1, Fluvastatin  
 94079-80-8, Cicaprost 97240-79-4, Topiramate 98048-97-6, Fosinopril  
 99614-02-5, Ondansetron 103577-45-3, Lansoprazole 103628-46-2,  
 Sumatriptan 104227-87-4, Famciclovir 106941-25-7, Adefovir  
 109889-09-0, Granisetron 113852-37-2, Cidofovir 115103-54-3, Tiagabine  
 116644-53-2, Mibefradil **120210-48-2**, Tenidap  
 RL: BSU (Biological study, unclassified); PRP (Properties); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with Abraham descriptors (Erratum))  
 IT **71125-38-7**, Meloxicam  
 RL: BSU (Biological study, unclassified); PRP (Properties); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with Abraham descriptors (Erratum))  
 RN **71125-38-7** HCAPLUS  
 CN 2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-(5-methyl-2-  
 thiazolyl)-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT 71125-38-7, Meloxicam 79217-60-0, Cyclosporin  
 120210-48-2, Tenidap  
 RL: BSU (Biological study, unclassified); PRP (Properties); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with Abraham descriptors (Erratum))

L199 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:453996 HCAPLUS

DOCUMENT NUMBER: 135:266632

TITLE: Evaluation of human intestinal absorption data and  
 subsequent derivation of a quantitative  
 structure-activity relationship (QSAR) with the  
 Abraham descriptors

AUTHOR(S): Zhao, Yuan H.; Le, Joelle; Abraham, Michael H.;  
 Hersey, Anne; Eddershaw, Peter J.; Luscombe, Chris N.;  
 Boutina, Darko; Beck, Gordon; Sherborne, Brad; Cooper,  
 Ian; Platts, James A.

CORPORATE SOURCE: Department of Chemistry, University College London,  
 London, WC1H 0AJ, UK

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 749-784

CODEN: JPMSAE; ISSN: 0022-3549

PUBLISHER: Wiley-Liss, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The human intestinal absorption of 241 drugs was evaluated. Three main  
 methods were used to determine the human intestinal absorption:  
 bioavailability, percentage of urinary excretion of drug-related material  
 following oral administration, and the ratio of cumulative urinary  
 excretion of drug-related material following oral and i.v. administration.  
 The general solvation equation developed by Abraham's group was used to  
 model the human intestinal absorption data of 169 drugs we considered to  
 have reliable data. The model contains five Abraham descriptors calculated by  
 the ABSOLV program. The results show that Abraham descriptors can  
 successfully predict human intestinal absorption if the human absorption  
 data is carefully classified based on solubility and administration dose to  
 humans.

CC 1-3 (Pharmacology)

IT 50-02-2, Dexamethasone 50-22-6, Corticosterone 50-23-7, Hydrocortisone  
 50-24-8, Prednisolone 50-47-5, Desipramine 50-49-7, Imipramine  
 50-78-2, Acetylsalicylic acid 50-81-7, Ascorbic acid, biological studies  
 51-34-3, Scopolamine 51-52-5, Propylthiouracil 51-55-8, Atropine,  
 biological studies 52-01-7, Spironolactone 52-53-9, Verapamil  
 53-86-1, Indomethacin 54-11-5, Nicotine 54-31-9, Furosemide 54-85-3,  
 Isoniazid 56-40-6, Glycine, biological studies 56-54-2, Quinidine  
 56-75-7, Chloramphenicol 57-27-2, Morphine, biological studies  
 57-41-0, Phenytoin 57-63-6, Ethinylestradiol 57-83-0, Progesterone,

biological studies 57-92-1, Streptomycin, biological studies 58-08-2,  
 Caffeine, biological studies 58-15-1, Aminopyrine 58-22-0,  
 Testosterone 58-55-9, Theophylline, biological studies 58-93-5,  
 Hydrochlorothiazide 58-94-6, Chlorothiazide 59-05-2, Methotrexate  
 59-67-6, Nicotinic acid, biological studies 59-92-7, Levodopa,  
 biological studies 60-80-0, Antipyrine 61-33-6, Benzylpenicillin,  
 biological studies 61-75-6, Bretylum tosylate 64-77-7, Tolbutamide  
 68-41-7, Cycloserine 69-53-4, Ampicillin 69-65-8, Mannitol 69-72-7,  
 Salicylic acid, biological studies 74-55-5, Ethambutol 76-57-3,  
 Codeine 76-99-3, Methadone 81-07-2, Saccharin 81-81-2, Warfarin  
 83-43-2, Methylprednisolone 87-08-1, Phenoxymethylpenicillin 97-77-8,  
 Disulfiram 99-66-1, Valproic acid 103-90-2, Acetaminophen 104-06-3,  
 Thiacetazone 114-07-8, Erythromycin 125-28-0, Dihydrocodeine  
 154-21-2, Lincomycin 300-62-9, Amphetamine 427-51-0, Cyproterone  
 acetate 439-14-5, Diazepam 465-65-6, Naloxone 508-77-0, Cymarin  
 512-69-6, Raffinose 525-66-6, Propranolol 555-30-6, Methyldopa  
 586-06-1, Metaproterenol 599-79-1, Sulfasalazine 604-75-1, Oxazepam  
 630-60-4, Ouabain 637-07-0, Clofibrate 657-24-9, Metformin 738-70-5,  
 Trimethoprim 797-63-7, Levonorgestrel 848-75-9, Lormetazepam  
 1088-11-5, Nordiazepam 1156-05-4, Phenglutarimide 1197-18-8,  
 Tranexamic acid 1225-20-3, Iothalamate sodium 1397-89-3, Amphotericin  
 B 1404-04-2, Neomycin 1812-30-2, Bromazepam 2165-19-7, Guanoxan  
 2609-46-3, Amiloride 3056-17-5, Stavudine 3375-50-6,  
 Mercaptoethanesulfonic acid 3930-20-9, Sotalol 4205-90-7, Clonidine  
 4428-95-9, Foscarnet 4618-18-2, Lactulose 5051-62-7, Guanabenz  
 6452-71-7, Oxprenolol 6673-35-4, Practolol 8063-07-8, Kanamycin  
 10238-21-8, Glyburide 11003-38-6, Capreomycin 13392-18-2, Fenoterol  
 13523-86-9, Pindolol 13655-52-2, Alprenolol 15307-86-5, Diclofenac  
 15421-84-8, Trapidil 15676-16-1, Sulpiride 15686-71-2, Cephalixin  
 15687-27-1, Ibuprofen 15687-41-9, Oxyfedrine 15722-48-2, Olsalazine  
 15826-37-6, Cromolyn sodium 15876-67-2, Distigmine bromide 16662-47-8,  
 Gallopamil 17560-51-9, Metolazone 19216-56-9, Prazosin 20448-86-6,  
 Bornaprine 20830-75-5, Digoxin 21187-98-4, Gliclazide 22071-15-4,  
 Ketoprofen 22204-53-1, Naproxen 23031-25-6, Terbutaline 23155-02-4,  
 Fosfomycin 23214-92-8, Doxorubicin 25451-15-4, Felbamate 25614-03-3,  
 Bromocriptine 25876-10-2, Gentamicin-C1 26787-78-0, Amoxicillin  
 26839-75-8, Timolol 27025-49-6, Carfecillin 27203-92-5, Tramadol  
 27589-33-9, Azosemide 28395-03-1, Bumetanide 28981-97-7, Alprazolam  
 29122-68-7, Atenolol 30516-87-1, Zidovudine 31828-71-4, Mexiletine  
 32953-89-2, Rimiterol 32988-50-4, Viomycin 33279-57-1 33419-42-0,  
 Etoposide 34042-85-8, Sudoxicam 34552-84-6, Isoxicam 34645-84-6,  
 Fenclofenac 34661-75-1, Urapidil 34911-55-2, Bupropion 36104-80-0,  
 Camazepam 36322-90-4, Piroxicam 36791-04-5, Ribavirin 36894-69-6,  
 Labetalol 37517-30-9, Acebutolol 37717-21-8, AAFC 38194-50-2,  
 Sulindac 38304-91-5, Minoxidil 38452-29-8, Tolmesoxide 38677-81-5,  
 Pirbuterol 39562-70-4, Nitrendipine 42200-33-9, Nadolol 46817-91-8,  
 Viloxazine 50370-12-2, Cefadroxil 51384-51-1, Metoprolol 51481-61-9,  
 Cimetidine 51627-14-6, Cefatrizine 51926-52-4, D-Phenylalanyl-L-  
 proline 53583-79-2, Sultopride 54063-54-6, Reproterol 54143-55-4,  
 Flecainide 55268-74-1, Praziquantel 55268-75-2, Cefuroxime  
 56180-94-0, Acarbose 56187-89-4, Ximoprofen 56211-40-6, Torasemide  
 59277-89-3, Acyclovir 59804-37-4, Tenoxicam 60142-96-3, Gabapentin  
 60569-19-9, Propiverine 60607-34-3, Oxatomide 60719-84-8, Amrinone  
 62571-86-2, Captopril 63590-64-7, Terazosin 63659-18-7, Betaxolol  
 63675-72-9, Nisoldipine 64544-07-6, Cefuroximeaxetil 65243-33-6,  
 Cefetamet pivoxil 66357-35-5, Ranitidine 66508-37-0, Fosmidomycin  
 68401-81-0, Ceftizoxime 68506-86-5, Vigabatrin 70052-12-9,  
 Eflornithine 70374-39-9, Lornoxicam 70458-92-3, Pefloxacin  
 70458-96-7, Norfloxacin 71125-38-7, Meloxicam 72509-76-3,  
 Felodipine 73384-59-5, Ceftriaxone 73590-58-6, Omeprazole



74103-06-3, Ketorolac 74738-24-2, Recainam 75330-75-5, Lovastatin  
 75438-57-2, Moxonidine 75695-93-1, Isradipine 75847-73-3, Enalapril  
 75949-61-0, Pafenolol 76420-72-9, Enalaprilat 76470-66-1, Loracarbef  
 76541-72-5, Mifobate 76547-98-3, Lisinopril 76824-35-6, Famotidine  
 76963-41-2, Nizatidine 77181-69-2, Sorivudine 78110-38-0, Aztreonam  
 78755-81-4, Flumazenil **79217-60-0**, Cyclosporin 81093-37-0,  
 Pravastatin 81098-60-4, Cisapride 81801-12-9, Xamoterol 82410-32-0,  
 Ganciclovir 82419-36-1, Ofloxacin 83366-66-9, Nefazodone 83905-01-5,  
 Azithromycin 84057-84-1, Lamotrigine 84490-12-0, Piroximone  
 84558-93-0, Netivudine 85721-33-1, Ciprofloxacin 86386-73-4,  
 Fluconazole 86541-75-5, Benazepril 87848-99-5, Acrivastine  
 89778-26-7, Toremfifene 93413-69-5, Venlafaxine 93957-54-1, Fluvastatin  
 94079-80-8, Cicaprost 97240-79-4, Topiramate 98048-97-6, Fosinopril  
 99614-02-5, Ondansetron 103577-45-3, Lansoprazole 103628-46-2,  
 Sumatriptan 104227-87-4, Famciclovir 106941-25-7, Adefovir  
 109889-09-0, Granisetron 113852-37-2, Cidofovir 115103-54-3, Tiagabine  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); PROC  
 (Process); USES (Uses)

(evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with the Abraham descriptors)

IT 116644-53-2, Mibefradil **120210-48-2**, Tenidap 134678-17-4,  
 Lamivudine 144701-48-4, Telmisartan 146939-27-7, Ziprasidone  
 147059-75-4, CP99219

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); PROC  
 (Process); USES (Uses)

(evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with the Abraham descriptors)

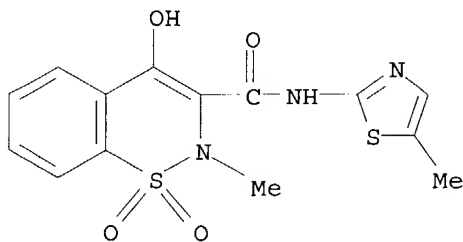
IT **71125-38-7**, Meloxicam

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); PROC  
 (Process); USES (Uses)

(evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with the Abraham descriptors)

RN 71125-38-7 HCAPLUS

CN 2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-(5-methyl-2-  
 thiazolyl)-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT **71125-38-7**, Meloxicam **79217-60-0**, Cyclosporin  
**120210-48-2**, Tenidap

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP  
 (Properties); THU (Therapeutic use); BIOL (Biological study); PROC  
 (Process); USES (Uses)

(evaluation of human intestinal drug absorption data and subsequent  
 derivation of QSAR with the Abraham descriptors)

REFERENCE COUNT: 270 THERE ARE 270 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

## FORMAT

L199 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001:396644 HCAPLUS  
 DOCUMENT NUMBER: 135:24671  
 TITLE: Solid carriers for improved delivery of active ingredients in pharmaceutical compositions  
 INVENTOR(S): Patel, Manesh V.; Chen, Feng-jing  
 PATENT ASSIGNEE(S): Lipocine, Inc., USA  
 SOURCE: PCT Int. Appl., 107 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 12  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001037808	A1	20010531	WO 2000-US32255	20001122
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6248363	B1	20010619	US 1999-447690	19991123
EP 1233756	A1	20020828	EP 2000-980761	20001122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003517470	T2	20030527	JP 2001-539423	20001122
PRIORITY APPLN. INFO.: US 1999-447690 A 19991123 WO 2000-US32255 W 20001122				
AB	The present invention provides solid pharmaceutical compns. for improved delivery of a wide variety of pharmaceutical active ingredients contained therein or sep. administered. In one embodiment, the solid pharmaceutical composition includes a solid carrier, the solid carrier including a substrate and an encapsulation coat on the substrate. The encapsulation coat can include different combinations of pharmaceutical active ingredients, hydrophilic surfactant, lipophilic surfactants and triglycerides. In another embodiment, the solid pharmaceutical composition includes a solid carrier, the solid carrier being formed of different combinations of pharmaceutical active ingredients, hydrophilic surfactants, lipophilic surfactants and triglycerides. The compns. of the present invention can be used for improved delivery of hydrophilic or hydrophobic pharmaceutical active ingredients, such as drugs, nutritionals, cosmeceuticals and diagnostic agents. A composition contained glyburide 1, PEG 40 stearate 33, glycerol monolaurate 17, and nonpareil seed 80 g.			
IC	ICM A61K009-14 ICS A61K009-16; A61K009-20; A61K009-46; A61K009-48; A61K009-50; A61K009-54			
CC	63-6 (Pharmaceuticals)			
IT	50-14-6, Ergocalciferol 50-24-8, Prednisolone 50-28-2, Estradiol, biological studies 50-34-0, Propantheline bromide 50-56-6, Oxytocin, biological studies 51-15-0, Pralidoxime chloride 51-43-4, Epinephrine 51-48-9, L-Thyroxine, biological studies 51-55-8, Atropine, biological studies 51-60-5, Neostigminemethyl sulfate 52-01-7, Spironolactone 52-24-4, Thiotepea 53-43-0, Dehydroepiandrosterone 55-98-1, Busulphan			

57-13-6, Urea, biological studies 57-22-7, Vincristine 57-64-7, Physostigmine salicylate 57-83-0, Progesterone, biological studies 57-94-3, Tubocurarine chloride 59-05-2, Methotrexate 60-31-1, Acetylcholine chloride 62-31-7, Dopamine hydrochloride 63-91-2, L-Phenylalanine, biological studies 65-28-1, Phentolamine mesylate 66-76-2, Dicoumarol 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-96-9, Dihydrotachysterol 67-97-0, Cholecalciferol 68-19-9, Vitamin b12 69-65-8, D-Mannitol 70-51-9, Deferoxamine 71-27-2, Suxamethonium chloride 74-89-5, Methanamine, biological studies 76-57-3, Codeine 76-90-4, Mepenzolate bromide 76-99-3, Methadone 77-19-0, Dicyclomine 87-33-2, Isosorbide dinitrate 89-57-6, Mesalamine 90-82-4, Pseudoephedrine 101-26-8, Pyridostigmine bromide 104-31-4, Benzonatate 113-15-5, Ergotamine 113-92-8, Chlorpheniramine 114-07-8, Erythromycin 114-80-7, Neostigmine bromide 125-84-8, Aminogluthethimide 126-07-8, Griseofulvin 127-40-2, Lutein 129-06-6, Warfarin sodium 131-49-7, Diatrizoate meglumine 140-64-7, Pentamidine isethionate 147-94-4, Cytarabine 154-21-2, Lincomycin 155-97-5, Pyridostigmine 298-46-4, Carbamazepine 298-57-7, Cinnarizine 298-81-7, Methoxsalen 299-42-3, Ephedrine 300-62-9, Amphetamine 302-79-4, Tretinoin 303-49-1, Clomipramine 303-53-7, Cyclobenzaprine 303-98-0, Coenzyme Q10 321-64-2, Tacrine 359-83-1, Pentazocine 378-44-9, Betamethasone 404-86-4, Capsaicin 437-38-7, Fentanyl 443-48-1, Metronidazole 502-65-8, Lycopene 511-12-6, Dihydroergotamine 520-85-4, Medroxyprogesteron 577-11-7, Sodium docusate 595-33-5 596-51-0, Glycopyrrolate 616-91-1, Acetylcysteine 665-66-7, Amantadine hydrochloride 737-31-5, Diatrizoate sodium 865-21-4, Vinblastine 911-45-5, Clomiphene 1115-70-4, Metformin hydrochloride 1134-47-0, Baclofen 1264-72-8, Colistin sulfate 1319-82-0, Aminocaproic acid 1397-89-3, Amphotericin b 1403-66-3, Gentamycin 1404-90-6, Vancomycin 1405-20-5, Polymyxin B sulfate 1405-37-4, Capreomycin sulfate 1405-87-4, Bacitracin 1406-16-2, Vitamin D 1406-18-4, Vitamin E 1492-18-8, Leucovorin calcium 1501-84-4, Rimantadine hydrochloride 1684-40-8, Tacrine hydrochloride 1695-77-8, Spectinomycin 1951-25-3, Amiodarone 1972-08-3, Tetrahydrocannabinol 2016-88-8, Amiloride hydrochloride 3056-17-5, Stavudine 3485-62-9, Clidinium bromide 3778-73-2, Isofosfamide 3930-20-9, Sotalol 4291-63-8, Cladribine 4419-39-0, Beclomethasone 4759-48-2, Isotretinoin 5104-49-4, Flurbiprofen 5534-95-2, Pentagastrin 6493-05-6, Pentoxifylline 7261-97-4, Dantrolene 7414-83-7, Disodium etidronate 7481-89-2, Zalcitabine 7648-98-8, Ambenonium 7689-03-4, Camptothecin 8068-28-8, Colistimethate sodium 9001-27-8, Factor VIII 9001-28-9, Factor IX 9002-01-1, Streptokinase 9002-60-2, Corticotropin, biological studies 9002-61-3, Chorionic gonadotropin 9004-17-5, NPH insulin 9004-99-3, Polyethylene glycol stearate 9005-63-4D, Polyoxyethylene sorbitan, fatty acid esters 9007-92-5, Glucagon, biological studies 9015-68-3, Asparaginase 9034-40-6, Gonadotropin-releasing hormone 9039-53-6, Urokinase 9041-08-1, Dalteparin sodium 9041-93-4, Bleomycin sulfate 9087-70-1, Aprotinin 10238-21-8, Glibenclamide 10540-29-1, Tamoxifen 10596-23-3, Clodronic acid 11000-17-2, Vasopressin 11061-68-0, Insulin (human) 11103-57-4, Vitamin A 12001-79-5, Vitamin K 12584-58-6, Porcine insulin 13265-10-6, Methscopolamine 15307-86-5, Diclofenac 15500-66-0, Pancuronium bromide 15574-96-6, Pizotifen 15663-27-1, Cisplatin 15686-51-8, Clemastine 15686-71-2, Cephalixin 15687-27-1, Ibuprofen 15826-37-6, Cromolyn sodium 16679-58-6, Desmopressin 16960-16-0, Cosyntropin 17230-88-5, Danazol 18323-44-9, Clindamycin 18559-94-9, Albuterol 18883-66-4, Streptozocin 19356-17-3, Calcifediol 20537-88-6, Amifostine 20594-83-6, Nalbuphine 20830-75-5, Digoxin 21215-62-3, Human calcitonin 21256-18-8, Oxaprozin 21679-14-1, Fludarabine 21829-25-4, Nifedipine 22254-24-6, Ipratropium bromide 22916-47-8, Miconazole 23031-32-5, Terbutaline sulfate 23214-92-8,

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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(solid carriers for improved delivery of active ingredients in pharmaceutical compns.)

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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(solid carriers for improved delivery of active ingredients in pharmaceutical compns.)

IT **59865-13-3**, Cyclosporine

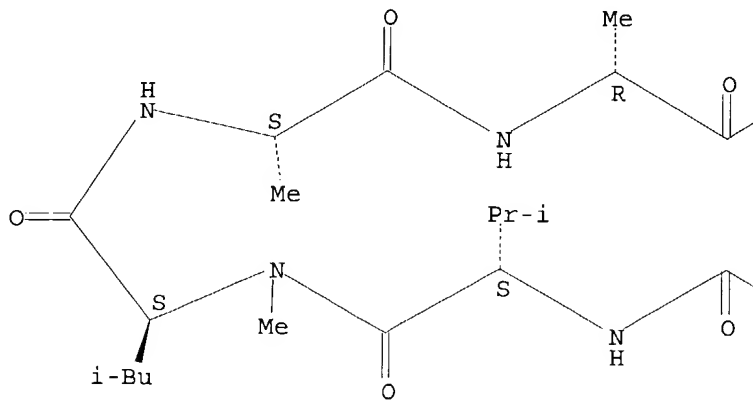
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(solid carriers for improved delivery of active ingredients in pharmaceutical compns.)

RN 59865-13-3 HCAPLUS

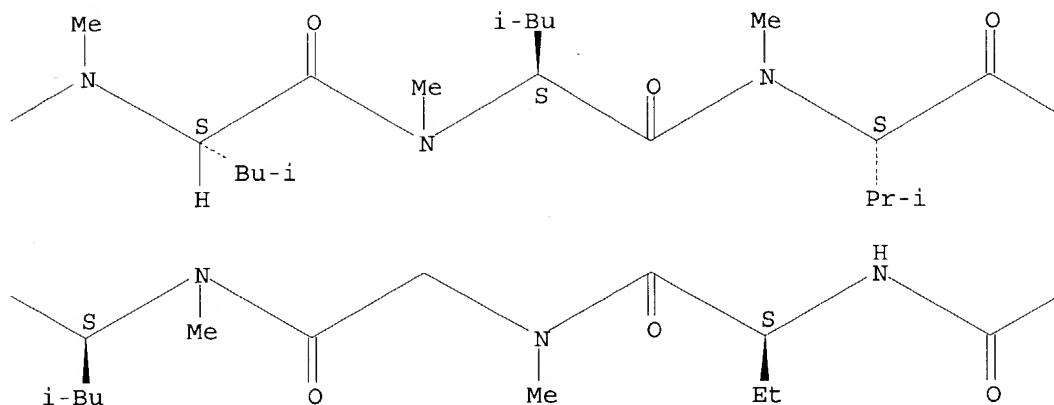
CN Cyclosporin A (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

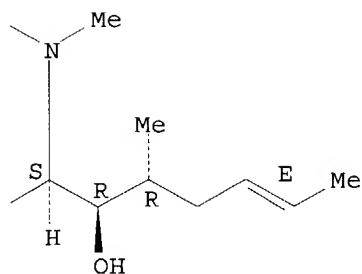
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PAGE 1-C



IT 59865-13-3, Cyclosporine 111406-87-2, Zileuton  
162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(solid carriers for improved delivery of active ingredients in  
pharmaceutical compns.)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:300514 HCAPLUS

DOCUMENT NUMBER: 134:331617

TITLE: Oil-in-water emulsion compositions for polyfunctional  
active ingredients

INVENTOR(S): Chen, Feng-jing; Patel, Mahesh V.

PATENT ASSIGNEE(S): Lipocine, Inc., USA

SOURCE: PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028555	A1	20010426	WO 2000-US28835	20001018
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002107265	A1	20020808	US 1999-420159	19991018
US 6720001	B2	20040413		

PRIORITY APPLN. INFO.: US 1999-420159 A 19991018

AB Pharmaceutical oil-in-water emulsions for delivery of polyfunctional active ingredients with improved loading capacity, enhanced stability, and reduced irritation and local toxicity are described. Emulsions include an aqueous phase, an oil phase comprising a structured triglyceride, and an emulsifier. The structured triglyceride of the oil phase is substantially free of triglycerides having three medium chain (C6-C12) fatty acid moieties, or a combination of a long chain triglyceride and a polarity-enhancing polarity modifier. The present invention also provides methods of treating an animal with a polyfunctional active ingredient, using dosage forms of the pharmaceutical emulsions. For example, an emulsion was prepared, with cyclosporin A as the polyfunctional active ingredient dissolved in an oil phase including a structured triglyceride (Captex 810D) and a long chain triglyceride (safflower oil). The composition contained (by weight) cyclosporin A 1.0, Captex 810D 5.0, safflower oil 5.0, BHT 0.02, egg phospholipid 2.4, dimyristoylphosphatidyl glycerol 0.2, glycerol 2.25, EDTA 0.01, and water up to 100%, resp.

IC ICM A61K031-355

ICS A61K031-20

CC 63-6 (Pharmaceuticals)

IT 50-14-6, Ergocalciferol 50-21-5D, Lactic acid, glycerides 50-24-8, Prednisolone 50-28-2, Estradiol, biological studies 50-34-0, Propantheline bromide 50-56-6, Oxytocin, biological studies 50-70-4, Sorbitol, biological studies 51-15-0, Pralidoxime chloride 51-43-4, Epinephrine 51-48-9, L-Thyroxine, biological studies 51-55-8, Atropine, biological studies 51-60-5, Neostigmine methyl sulfate 52-01-7, Spironolactone 52-24-4, Thiotepa 55-98-1, Busulfan 56-81-5, Glycerol, biological studies 57-13-6, Urea, biological studies 57-22-7, Vincristine 57-55-6, Propylene glycol, biological studies 57-55-6D, Propylene glycol, fatty acid esters 57-64-7, Physostigmine salicylate 57-83-0, Progesterone, biological studies 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, fatty acid esters and polyethoxylated 57-94-3, Tubocurarine chloride 59-05-2, Methotrexate 60-31-1, Acetylcholine chloride 62-31-7, Dopamine hydrochloride 63-91-2, Phenylalanine, biological studies 64-17-5, Ethanol, biological studies 65-28-1, Phentolamine mesylate 66-76-2, Dicoumarol 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-96-9, Dihydrotachysterol 67-97-0, Cholecalciferol 68-19-9, Vitamin B12 69-65-8, D-Mannitol 70-51-9, Deferoxamine 71-27-2, Suxamethonium chloride 74-89-5, Methanamine, biological studies 76-57-3, Codeine 76-90-4, Mepenzolate bromide 76-99-3, Methadone 77-19-0, Dicyclomine 83-44-3, Deoxycholic acid 87-33-2, Isosorbide dinitrate 89-57-6, Mesalamine 101-26-8, Pyridostigmine bromide 104-31-4, Benzonatate 107-21-1, Ethylene glycol, biological studies 112-80-1, Oleic acid,

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37220-82-9, Peceol 37321-62-3, Lauroglycol FCC 38304-91-5, Minoxidil  
 39809-25-1, Penciclovir 41340-25-4, Etodolac 41575-94-4, Carboplatin  
 42057-22-7, Mezlocillin sodium 42540-40-9, Cefamandole nafate  
 42924-53-8, Nabumetone 43200-80-2, Zopiclone 47931-85-1, Calcitonin  
 salmon 49562-28-9, Fenofibrate 49697-38-3, Rimexolone 50700-72-6,  
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 51333-22-3, Budesonide 51384-51-1, Metoprolol 51481-61-9, Cimetidine  
 53123-88-9, Sirolimus 53179-11-6, Loperamide 53230-10-7, Mefloquine  
 53910-25-1, Pentostatin 54063-53-5, Propafenone 54910-89-3, Fluoxetine  
 54965-21-8, Albendazole 55079-83-9, Acitretin 55142-85-3, Ticlopidine  
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 Acyclovir 59467-70-8, Midazolam 59703-84-3, Piperacillin sodium  
 59865-13-3, Cyclosporin A

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(oil-in-water emulsion compns. for polyfunctional active ingredients)

IT 60142-96-3, Gabapentin 61270-78-8, Cefonicid sodium 61361-72-6,  
 Dimyristoylphosphatidyl glycerol 61379-65-5, Rifapentine 61489-71-2,  
 Menotropin 61869-08-7, Paroxetine 62013-04-1, Dirithromycin  
 62356-64-3 62893-19-0, Cefoperazone 63527-52-6, Cefotaxime  
 63585-09-1, Foscarnet sodium 63590-64-7, Terazosin 63612-50-0,  
 Nilutamide 63675-72-9, Nisoldipine 64228-81-5, Atracurium besylate  
 64544-07-6, Cefuroxime axetil 65271-80-9, Mitoxantrone 65277-42-1,  
 Ketoconazole 66376-36-1, Alendronate 66419-50-9, Bovine growth hormone  
 68099-86-5, Bepridil hydrochloride 68401-81-0, Ceftizoxime 68506-86-5,  
 Vigabatrin 69049-74-7, Nedocromil sodium 69655-05-6, Didanosine  
 69756-53-2, Halofantrine 70288-86-7, Ivermectin 70458-92-3, Pefloxacin  
 70458-96-7, Norfloxacin 71486-22-1, Vinorelbine 72432-03-2, Miglitol  
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 78110-38-0, Aztreonam 79350-37-1, Cefixime 79517-01-4, Octreotide  
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 Simvastatin 81093-37-0, Pravastatin 81098-60-4, Cisapride  
 81103-11-9, Clarithromycin 81161-17-3, Esmolol hydrochloride  
 82410-32-0, Ganciclovir 82419-36-1, Ofloxacin 82626-48-0, Zolpidem  
 82952-64-5, Trimetrexate glucuronate 83799-24-0, Fexofenadine  
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 Cetirizine 83905-01-5, Azithromycin 84057-84-1, Lamotrigine  
 84371-65-3, Mifepristone 84449-90-1, Raloxifene 84625-61-6,  
 Itraconazole 85721-33-1, Ciprofloxacin 86386-73-4, Fluconazole  
 86541-75-5, Benazepril 87679-37-6, Trandolapril 88669-04-9,  
 Trospetomycin 89778-26-7, Toremifene 89987-06-4, Tiludronate  
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 Famciclovir 104987-11-3, Tacrolimus 105462-24-6, Risedronic acid  
 106133-20-4, Tamsulosin 106650-56-0, Sibutramine 106819-53-8,  
 Doxacurium chloride 106861-44-3, Mivacurium chloride 107648-80-6,  
 Cefepime hydrochloride 107753-78-6, Zafirlukast 110871-86-8,  
 Sparfloxacin 111025-46-8, Pioglitazone 111406-87-2, Zileuton  
 112965-21-6, Calcipotriene 113189-02-9, Antihemophilic factor  
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 139264-17-8, Zolmitriptan 139481-59-7, Candesartan 139639-23-9, Tissue  
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 144494-65-5, Tirofiban 144701-48-4, Telmisartan 145599-86-6,  
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 Pramlintide 153559-49-0, Targretin 154361-50-9, Capecitabine  
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 157810-81-6, Indinavir sulfate 158747-02-5, Frovatriptan 158966-92-8,  
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**162011-90-7**, Rofecoxib 165101-51-9, Becaplermin 169148-63-4,  
 Insulin detemir 169590-42-5, Celecoxib 173146-27-5, Denileukin  
 diftitox 191588-94-0, TNK-tPA 208666-87-9, Captex 810D

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (oil-in-water emulsion compns. for polyfunctional active ingredients)

IT **59865-13-3**, Cyclosporin A

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (oil-in-water emulsion compns. for polyfunctional active ingredients)

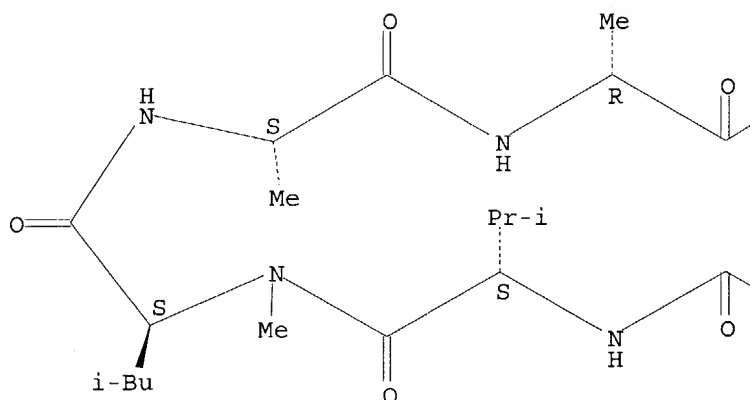
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

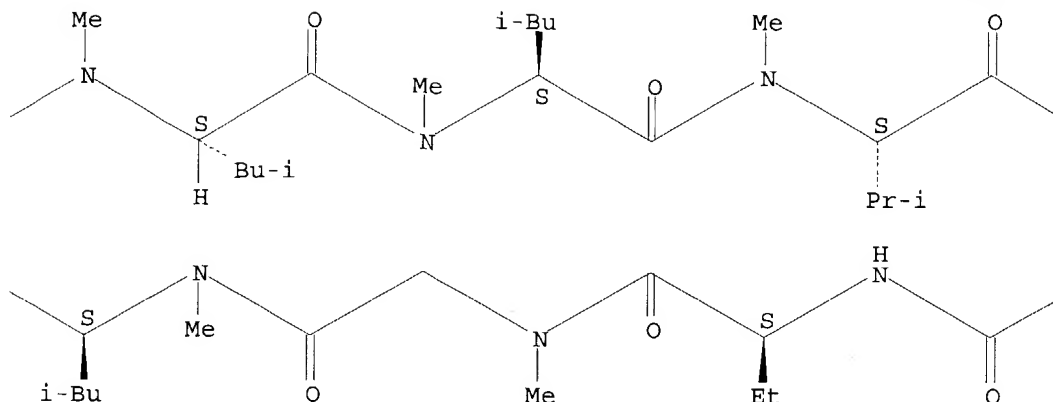
Absolute stereochemistry.

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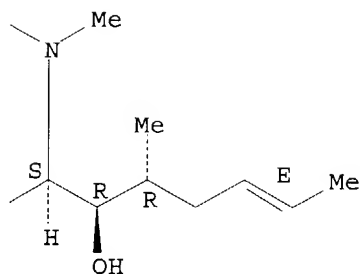
PAGE 1-A



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PAGE 1-C



IT 59865-13-3, Cyclosporin A 111406-87-2, Zileuton

162011-90-7, Rofecoxib

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(oil-in-water emulsion compns. for polyfunctional active ingredients)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:754502 HCAPLUS

DOCUMENT NUMBER: 133:321880

TITLE: Treatment of inflammation and inflammation-related  
disorders with a combination of a cyclooxygenase-2  
inhibitor and a 5-lipoxygenase inhibitor.

INVENTOR(S): Isakson, Peter C.; Anderson, Gary D.; Gregory, Susan  
A.

PATENT ASSIGNEE(S): G.D. Searle and Co., USA

SOURCE: U.S. 21 in-part of U.S. Ser. No. 489,472,

DOCUMENT TYPE:

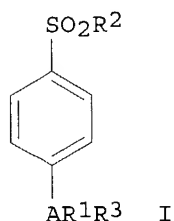
LANGUAGE:

FAMILY ACC. NUM. COUNT

*Applicants*

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6136839	A	20001024	US 1996-661660	19960611
CA 2224517	AA	19961227	CA 1996-2224517	19960611
PRIORITY APPLN. INFO.:			US 1995-489472	B2 19950612
OTHER SOURCE(S):			MARPAT 133:321880	
GI				



- AB A combination comprising a 5-lipoxygenase inhibitor and a cyclooxygenase-2 inhibitor selected from title compds. [I; A = pyrazolyl; R1 =  $\geq 1$  of (substituted) heterocyclyl, cycloalkyl, cycloalkenyl, aryl; R2 = Me, amino; R3 = H, halo, alkyl, alkenyl, alkynyl, oxo, cyano, CO<sub>2</sub>H, cyanoalkyl, heterocyclloxy, alkoxy, alkylthio, alkylcarbonyl, aryl, haloalkyl, etc.], is claimed. Thus, EtO<sub>2</sub>CCHF<sub>2</sub> in MeOCMe<sub>3</sub> was treated with NaOMe and then with 3-fluoro-4-methoxyacetophenone (preparation given) followed by 16 h stirring to give 96% 4,4-difluoro-1-(3-fluoro-4-methoxyphenyl)butane-1,3-dione. This was refluxed 16 h with 4-sulfonamidophenylhydrazine hydrochloride in EtOH to give 87% 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl-1H-pyrazol-1-yl]benzenesulfonamide (II). II with 6-[[3-fluoro-5-(3,4,5,6-tetrahydro-4-methoxy-2H-pyran-4-yl)phenoxy]methyl]-1-methyl-1H-quinazolin-2-one (III) at 30 mpk/day orally in mice in the collagen-induced arthritis screen reduced incidence of arthritis to 20% (vs. 100% for controls). A formulation containing II and III is given.
- IC ICM A61K031-415  
ICS A61K031-34
- NCL 514406000
- CC 28-8 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1, 63
- IT 141579-67-1P 169590-41-4P 170569-86-5P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)
- IT 341-88-8, KF 8940 4737-26-2, Isoflavan  
27686-84-6, Masoprocol 34334-69-5, Cirsiliol  
36441-32-4, DuP 654 46721-85-1, CBS 1114 50847-11-5,  
Ibudilast 60284-71-1, AHR 5333 75139-38-7,  
Carbazomycin B 79916-77-1, Forsythiaside 80809-81-0,  
Docebenone 87660-25-1, ONO 5349 91431-42-4, Lonapalene  
92532-05-3, Rev 5367 93211-49-5, L 651392  
96314-49-7, TEI 8005 96920-48-8, TMK 992  
96928-53-9, TMK 919 99107-52-5, Bunaprolast  
99134-29-9, L 651896 99318-09-9, QA 208-199

100035-75-4, Evandamine 101335-99-3, Eprovafen  
101618-31-9, TMK 789 101619-08-3, TMK 781  
101619-11-8, TMK 777 101910-24-1, PF 5901  
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103475-41-8, Tepoxalin 104007-80-9, TZI 41127  
104153-37-9, Rilopirox 105357-17-3, SC 41661A  
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111908-94-2, SK&F 104351 111908-95-3, SK&F 104493  
111974-60-8, WY 48252 112344-52-2, Flobufen  
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115255-10-2, ONO-LP 219 115255-23-7, ONO-LP 269  
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137945-48-3 138331-04-1, R 68151 139149-55-6, SB  
202235 139340-56-0, CI 1004 140841-32-3  
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195215-52-2, RG 5901A

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

IT 99-91-2 321-28-8, 2-Fluoroanisole 383-63-1,  
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RL: RCT (Reactant); RACT (Reactant or reagent)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

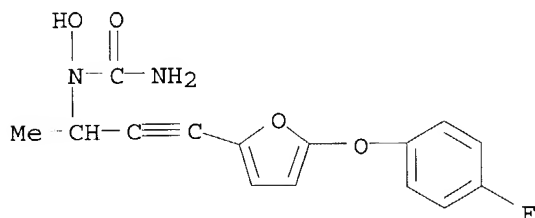
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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

RN 141579-67-1 HCAPLUS

CN Urea, N-[3-[5-(4-fluorophenoxy)-2-furanyl]-1-methyl-2-propynyl]-N-hydroxy-  
(9CI) (CA INDEX NAME)



IT 141579-67-1P 169590-41-4P 170569-86-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

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60284-71-1, AHR 5333 75139-38-7, Carbazomycin B

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187112-11-4, BW 4C 187112-12-5, BW 70C  
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187112-23-8, EN 105 187112-26-1, FPL 64170  
187112-28-3, GR 80907 187112-30-7, HX 0386  
187112-32-9, L 691816 187112-33-0, Linazolast  
187112-35-2, LY 280810 187112-36-3, MM 7002  
187112-41-0, P 8892 187112-42-1, p 8977  
187112-43-2, PD 136005 187112-44-3, PD 145246  
187112-47-6, R 840 187112-50-1, RU 46057  
187112-52-3, SL 81-0433 187112-54-5, SS 810H  
187112-58-9, TMK 685 187112-59-0, TZI 2721  
187112-62-5, WAY 125007 187112-64-7, ZD 7717  
187112-65-8, ZM 216800 193739-23-0, CMI 392  
195215-27-1, Carbazoycin c 195215-52-2, RG 5901A

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

IT 99-91-2 321-28-8, 2-Fluoroanisole 383-63-1,  
Ethyl trifluoroacetate 454-31-9, Ethyl difluoroacetate  
27918-19-0, 4-Sulfonamidophenylhydrazine hydrochloride  
RL: RCT (Reactant); RACT (Reactant or reagent)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

IT 455-91-4P 18931-60-7P 170570-77-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(treatment of inflammation and inflammation-related disorders with a combination of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor)

REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:608551 HCAPLUS

DOCUMENT NUMBER: 133:213151

TITLE: Pharmaceutical compositions and methods for improved delivery of hydrophobic therapeutic agents

INVENTOR(S): Patel, Manesh V.; Chen, Feng-Jing

PATENT ASSIGNEE(S): Lipocine, Inc., USA

SOURCE: PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 12

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050007	A1	20000831	WO 2000-US165	20000105
W:		AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
RW:		GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
US 6294192	B1	20010925	US 1999-258654	19990226
AU 2000022242	A5	20000914	AU 2000-22242	20000105
AU 771659	B2	20040401		
NZ 513810	A	20010928	NZ 2000-513810	20000105
EP 1158959	A1	20011205	EP 2000-901394	20000105
R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
JP 2002537317	T2	20021105	JP 2000-600619	20000105
PRIORITY APPLN. INFO.:			US 1999-258654 A	19990226
			WO 2000-US165 W	20000105

AB The present invention relates to triglyceride-free pharmaceutical compns. for delivery of hydrophobic therapeutic agents. Compns. of the present invention include a hydrophobic therapeutic agent and a carrier, where the carrier is formed from a combination of a hydrophilic surfactant and a



hydrophobic surfactant. Upon dilution with an aqueous solvent, the composition forms a clear, aqueous dispersion of the surfactants containing the therapeutic agent.

The invention also provides methods of treatment with hydrophobic therapeutic agents using these compns. A pharmaceutical composition contained cyclosporin 0.14, Cremophor RH-40 0.41, Arlacel186 0.29, sodium taurocholate 0.26, and propylene glycol 0.46 mg.

IC ICM A61K009-127  
ICS A61K009-107; A61K038-13  
CC 63-6 (Pharmaceuticals)  
IT 50-14-6, Ergocalciferol 50-21-5D, Lactic acid, glycerides 50-24-8, Prednisolone 50-28-2, EStradiol, biological studies 50-70-4, Sorbitol, biological studies 51-48-9, L-Thyroxine, biological studies 52-01-7, Spironolactone 55-98-1, Busulphan 56-81-5, 1,2,3-Propanetriol, biological studies 56-81-5D, Glycerol, polyethylene fatty acid esters 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 57-55-6, 1,2-Propanediol, biological studies 57-55-6D, Propylene glycol, ethers 57-83-0, Progesterone, biological studies 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, polyoxyethylene derivs. 60-33-3, 9,12-Octadecadienoic acid (9Z,12Z)-, biological studies 64-17-5, Ethanol, biological studies 66-76-2, Dicoumarol 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-63-0, Isopropanol, biological studies 67-96-9, Dihydrotachysterol 67-97-0, Cholecalciferol 69-65-8, Mannitol 71-36-3, Butanol, biological studies 76-57-3, Codeine 76-99-3, Methadone 77-89-4, Acetyl triethylcitrate 77-90-7, Acetyl tributyl citrate 77-92-9D, Citric acid, diglycerides 77-93-0, Triethylcitrate 77-94-1, Tributylcitrate 81-24-3 81-25-4 83-44-3 87-33-2, Isosorbide dinitrate 87-69-4D, Tartaric acid, glycerides, biological studies 90-82-4, Pseudoephedrine 100-51-6, Benzenemethanol, biological studies 102-76-1, Triacetin 104-31-4, Benzonatate 105-37-3, ETHyl propionate 105-54-4, Ethyl butyrate 105-60-2, biological studies 105-60-2D, Caprolactam, N-Alkyl derivs. 106-32-1, Ethyl caprylate 107-21-1, 1,2-Ethanediol, biological studies 110-27-0, Isopropyl myristate 111-03-5, Glyceryl monooleate 111-62-6, Crodamol EO 111-90-0, Transcutol 112-80-1, 9-Octadecenoic acid (9Z)-, biological studies 113-15-5, Ergotamine 113-92-8, Chlorpheniramine 115-77-5, biological studies 115-83-3, Pentaerythrityl Tetra stearate 124-07-2, Octanoic acid, biological studies 125-84-8, Aminogluthethimide 126-07-8, Griseofulvin 127-19-5, Dimethylacetamide 128-13-2 141-22-0 142-18-7, Glyceryl monolaurate 142-62-1, Hexanoic acid, biological studies 142-91-6, Isopropyl palmitate 143-07-7, Dodecanoic acid, biological studies 151-41-7, Lauryl sulfate 155-97-5, Pyridostigmine 298-46-4, 5H-Dibenz[b,f]azepine-5-carboxamide 298-57-7, Cinnarizine 298-81-7, Methoxsalen 300-62-9, Amphetamine 302-79-4, Tretinoin 303-49-1, Clomipramine 321-64-2, Tacrine 334-48-5, Decanoic acid 359-83-1, Pentazocine 360-65-6 378-44-9, Betamethasone 404-86-4, Capsaicin 437-38-7, Fentanyl 443-48-1, Metronidazole 463-40-1 474-25-9 475-31-0 511-12-6, Dihydroergotamine 516-35-8 516-50-7 520-85-4, Medroxyprogesterone 542-28-9, 8-Valerolactone 544-35-4, Ethyl linoleate 544-63-8, Tetradecanoic acid, biological studies 577-11-7, Sodium docusate 595-33-5 616-45-5, Pyrrolidone 616-45-5D, Pyrrolidone, N-Alkyl derivs. 623-84-7, Propylene glycol diacetate 640-79-9 675-20-7, 2-Piperidone 872-50-4, N-Methylpyrrolidone, biological studies 1134-47-0, Baclofen 1331-12-0, Propylene glycol monoacetate 1335-71-3, Propylene glycol oleate 1338-39-2, Arlacel 20 1338-43-8, Span 80 1397-89-3, Amphotericin B 1406-16-2, Vitamin D 1406-18-4, Vitamin E 1951-25-3, Amiodarone 1972-08-3, Tetrahydrocannabinol 2687-91-4, N-Ethylpyrrolidone

2687-94-7 2687-96-9 3068-88-0,  $\beta$ -Butyrolactone 3445-11-2  
 4419-39-0, Beclomethasone 4759-48-2, Isotretinoin 5104-49-4,  
 Flurbiprofen 5306-85-4, Dimethyl isosorbide 7261-97-4, Dantrolene  
 7488-99-5,  $\alpha$  Carotene 7664-93-9D, Sulfuric acid, salts alkyl  
 derivs., biological studies 7689-03-4, Camptothecin 8007-43-0,  
 Sorbitan sesquioleate 9002-89-5, Polyvinylalcohol 9002-92-0, Brij 30  
 9002-96-4 9003-39-8, Polyvinylpyrrolidone 9004-65-3, Hydroxypropyl  
 methylcellulose 9004-74-4, Methoxy polyethylene glycol 9004-81-3,  
 Polyoxyethylene laurate 9004-95-9, Polyoxyethylene cetyl ether  
 9004-96-0, PEG-32 oleate 9004-98-2, Polyoxyethylene oleyl ether  
 9004-99-3, Polyoxyethylene stearate 9005-00-9, Polyoxyethylene stearyl  
 ether 9005-02-1, Polyoxyethylene dilaurate 9005-07-6, Polyoxyethylene  
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 acid, salts 9005-37-2, Propylene glycol alginate 9005-63-4D,  
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 fatty acid esters 9005-64-5, Tween 20 9005-65-6, Polysorbate 80  
 9005-66-7, Tween 40 9005-67-8, Tween 60 9007-48-1, PLUROLIQUIDECC497  
 9011-21-6, Polyoxyethylene glyceryl stearate 9016-45-9 9036-19-5  
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 11140-04-8, Imwitor 988 12001-79-5, Vitamin K 12619-70-4, Cyclodextrin  
 12619-70-4D, Cyclodextrin, derivs. 12619-70-4D, Cyclodextrin,  
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 15574-96-6, Pizotifen 15686-51-8, Clemastine 15687-27-1, Ibuprofen  
 18559-94-9, Albuterol 19356-17-3, Calcifediol 20594-83-6, Nalbuphine  
 20830-75-5, Digoxin 21256-18-8, Oxaprozin 21829-25-4, Nifedipine  
 22882-95-7, Isopropyl linoleate 22916-47-8, Miconazole 23288-49-5,  
 Probucol 25168-73-4, Sucrose monostearate 25265-75-2, Butanediol  
 25322-68-3 25322-69-4, Polypropylene glycol 25339-99-5, Sucrose  
 monolaurate 25523-97-1, Dexchlorpheniramine 25618-55-7D, Polyglycerol,  
 fatty acid esters 25637-84-7, Glyceryl dioleate 25637-97-2, Sucrose  
 dipalmitate 25812-30-0, Gemfibrozil 26266-57-9, Sorbitan monopalmitate  
 26266-58-0, Sorbitan Trioleate 26402-22-2, Glyceryl monocaprate  
 26402-26-6, Glyceryl monocaprylate 26446-38-8, Sucrose monopalmitate  
 27154-43-4D, Piperidone, N-Alkyl derivs. 27195-16-0, Sucrose distearate  
 27203-92-5, TRamadol 27638-00-2, Glyceryl dilaurate 29094-61-9,  
 Glipizide 29767-20-2, Teniposide 31692-85-0, Glycofurool 32222-06-3,  
 Calcitriol 33069-62-4, Paclitaxel 33419-42-0, Etoposide 34911-55-2,  
 Bupropion 36354-80-0, Glyceryl dicaprylate 37321-62-3, Lauroglycol  
 38304-91-5, Minoxidil 41340-25-4, Etodolac 42924-53-8, Nabumetone  
 43200-80-2, Zopiclone 49562-28-9, Fenofibrate 49697-38-3, Rimexolone  
 51333-22-3, Budesonide 51481-61-9, Cimetidine 51938-44-4, Sorbitan  
 sesquisteate 52581-71-2, Volpo 3 53123-88-9, Sirolimus 53168-42-6,  
 Myvacet 9-45 53179-11-6, Loperamide 53230-10-7, Mefloquine  
 53988-07-1, Glyceryl dicaprate 54392-26-6, Sorbitan monoisostearate  
 54965-21-8, Albendazole 55079-83-9, Acitretin 55142-85-3, Ticlopidine  
 57107-97-8, Polyoxyethylene glyceryl oleate 59467-70-8, Midazolam  
 59865-13-3, Cyclosporine 60142-96-3, Gabapentin 61379-65-5,  
 Rifapentine 61869-08-7 62013-04-1, Dirithromycin 62356-64-3  
 63590-64-7, Terazosin 63612-50-0, Nilutamide 63675-72-9, Nisoldipine  
 65271-80-9, Mitoxantrone 65277-42-1, Ketoconazole 68506-86-5,  
 Vigabatrin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (pharmaceutical compns. and methods for improved delivery of  
 hydrophobic therapeutic agents)

IT 68958-64-5, Polyoxyethylene glyceryl trioleate 69756-53-2, Halofantrine  
 70288-86-7, Ivermectin 72432-03-2, Miglitol 72559-06-9, Rifabutine  
 73590-58-6, Omeprazole 73963-72-1, Cilostazol 74103-06-3, Ketorolac  
 74504-64-6, Polyglyceryl laurate 75706-12-6, Leflunomide 76547-98-3,  
 Lisinopril 76824-35-6, Famotidine 76963-41-2, Nizatidine

79217-60-0, Cyclosporin 79617-96-2, Sertraline 79794-75-5,  
 Loratadine 79902-63-9, Simvastatin 81093-37-0, Pravastatin  
 81098-60-4, Cisapride 81103-11-9, Clarithromycin 82626-48-0, Zolpidem  
 83799-24-0, Fexofenadine 83881-51-0, Cetirizine 83905-01-5,  
 Azithromycin 84057-84-1, Lamotrigine 84371-65-3, Mifepristone  
 84449-90-1, Raloxifene 84625-61-6, Itraconazole 85721-33-1,  
 Ciprofloxacin 86386-73-4, Fluconazole 86541-75-5, Benazepril  
 86637-84-5 88150-42-9, Amlodipine 89778-26-7, Toremifene 90357-06-5,  
 Bicalutamide 91161-71-6, Terbinafine 93390-81-9, Fosphenytoin  
 93413-69-5, Venlafaxine 93479-97-1, Glimepiride 93790-70-6,  
 Cholylsarcosine 93790-72-8 93957-54-1, Fluvastatin 95233-18-4,  
 Atovaquone 97240-79-4, Topiramate 97322-87-7, Troglitazone  
 97682-44-5, Irinotecan 98319-26-7, Finasteride 101828-21-1, Butenafine  
 103577-45-3, Lansoprazole 103628-46-2, Sumatriptan 104987-11-3,  
 Tacrolimus 106133-20-4, Tamsulosin 106392-12-5, Ethylene oxide  
 propylene oxide block copolymer 106650-56-0, Sibutramine 107753-78-6,  
 Zafirlukast 111025-46-8, Pioglitazone **111406-87-2**, Zileuton  
 112965-21-6, Calcipotriene 113665-84-2, Clopidogrel 115103-54-3,  
 Tiagabine 117976-89-3, Rabeprazole 118292-40-3, Tazarotene  
 120014-06-4, Donepezil 121679-13-8, Naratriptan 122320-73-4,  
 Rosiglitazone 123948-87-8, Topotecan 127779-20-8, Saquinavir  
 129497-78-5, Verteporfin 131918-61-1, Paricalcitol 133040-01-4,  
 Eprosartan 134523-00-5, Atorvastatin 135062-02-1, Repaglinide  
 137862-53-4, Valsartan 138402-11-6 139264-17-8, Zolmitriptan  
 139481-59-7, Candesartan 144034-80-0, Rizatriptan 144494-65-5,  
 Tirofiban 144701-48-4, Telmisartan 145599-86-6, Cerivastatin  
 145941-26-0, Oprelvekin 147059-72-1, Trovafloxacin 150372-93-3,  
 Polyoxyethylene glyceryl laurate 153559-49-0, Targretin 154598-52-4,  
 Efavirenz 155213-67-5, Ritonavir 156259-68-6, Capmul mcm  
 158747-02-5, Frovatriptan 158966-92-8, Montelukast 159989-64-7,  
 Nelfinavir **162011-90-7**, Rofecoxib 169590-42-5, Celecoxib  
 171599-83-0, Sildenafil citrate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (pharmaceutical compns. and methods for improved delivery of  
 hydrophobic therapeutic agents)

IT **59865-13-3**, Cyclosporine

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (pharmaceutical compns. and methods for improved delivery of  
 hydrophobic therapeutic agents)

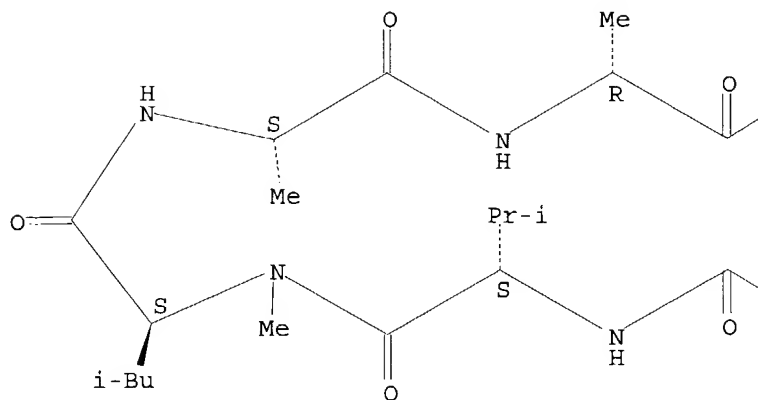
RN 59865-13-3 HCAPLUS

CN Cyclosporin A (9CI) (CA INDEX NAME)

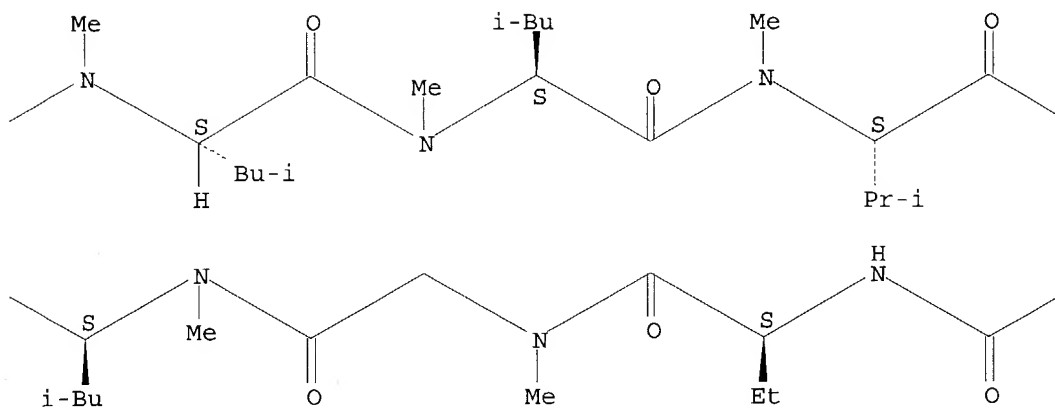
Absolute stereochemistry.

Double bond geometry as shown.

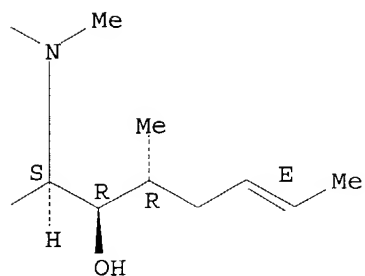
PAGE 1-A



PAGE 1-B



PAGE 1-C



IT 59865-13-3, Cyclosporine 79217-60-0, Cyclosporin

111406-87-2, Zileuton 162011-90-7, Rofecoxib  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (pharmaceutical compns. and methods for improved delivery of  
 hydrophobic therapeutic agents)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:744944 HCAPLUS

DOCUMENT NUMBER: 130:10625

TITLE: COX-2-selective carprofen and related compounds for  
 treating pain and inflammation in dogs

INVENTOR(S): Lundy, Kristin Marie; Ricketts, Anthony Paul

PATENT ASSIGNEE(S): Pfizer Inc., USA

SOURCE: PCT Int. Appl., 83 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850033	A1	19981112	WO 1998-IB662	19980501
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9869321	A1	19981127	AU 1998-69321	19980501
EP 988034	A1	20000329	EP 1998-915041	19980501
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
BR 9808720	A	20000711	BR 1998-8720	19980501
JP 2000513020	T2	20001003	JP 1998-547869	19980501
NZ 500183	A	20020426	NZ 1998-500183	19980501
NZ 516914	A	20030829	NZ 1998-516914	19980501
ZA 9803722	A	19991104	ZA 1998-3722	19980504
MX 9910148	A	20000228	MX 1999-10148	19991104
US 2003212123	A1	20031113	US 2003-422220	20030424
PRIORITY APPLN. INFO.:				
			US 1997-45635P	P 19970505
			NZ 1998-500183	A1 19980501
			WO 1998-IB662	W 19980501
			US 1999-308955	A3 19990527

OTHER SOURCE(S): MARPAT 130:10625

AB The invention relates to treating or preventing inflammatory processes and diseases in dogs associated with the activity of inducible cyclooxygenase-2 (COX-2), while at the same time reducing or eliminating undesirable side effects associated with simultaneous inhibition of the activity of constitutive cyclooxygenase-1 (COX-1) by selectively inhibiting COX-2 activity with reference to COX-1 activity, wherein the selectivity ratio or COX-2:COX-1 activity inhibition is at least 3:1 based on ex vivo inhibition levels measured in whole blood. The inhibitor is a member selected from the group of antiinflammatory compds. consisting essentially of salicylic acid derivs., p-aminophenol derivs., indole and indene acetic acids, heteroaryl acetic acids, arylpropionic acids, anthranilic acids, enolic acids, and alkanones; the inhibitor in particular is comprised of

the (+) (S) -enantiomer of 6-chloro- $\alpha$ -methyl-9H-carbazole-2-acetic acid.

IC ICM A61K031-40

CC 1-7 (Pharmacology)

IT 50-33-9, Phenylbutazone, biological studies 50-78-2, Aspirin 53-86-1, Indomethacin 61-68-7, Mefenamic acid 530-78-9, Flufenamic acid 644-62-2, Meclofenamic acid 4394-00-7, Niflumic acid 5104-49-4, Flurbiprofen 5728-52-9, Felbinac 13710-19-5, Tolfenamic acid 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 22071-15-4, Ketoprofen 22131-79-9, Alclofenac 22204-53-1, Naproxen 23981-47-7, 6-Methoxy-2-naphthylacetic acid 36322-90-4, Piroxicam 38677-85-9, Flunixin 41340-25-4, Etodolac 51803-78-2, Nimesulide 52263-83-9, (R)-Carprofen 71109-09-6, Vedaprofen 71125-38-7, Meloxicam 120210-48-2, Tenidap 123653-11-2, NS-398 135202-79-8, Ilonidap

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(COX-2-selective carprofen and related compds. for treating pain and inflammation in dogs, and comparative inhibition of COX-1 and -2 by carprofen and other NSAIDs)

IT 52-67-5, Penicillamine 57-22-7, Vincristine 57-66-9, Probenecid 57-96-5, Sulfipyrazone 59-05-2, Methotrexate 64-86-8, Colchicine 118-42-3, Hydroxychloroquine 315-30-0, Allopurinol 446-86-6, Azathioprine 865-21-4, Vinblastine 3562-84-3, Benzbromarone 7440-57-5D, Gold, aurothio derivs., biological studies 59865-13-3, Cyclosporine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(COX-2-selective carprofen and related compds. for treating pain and inflammation in dogs, and use with other agents)

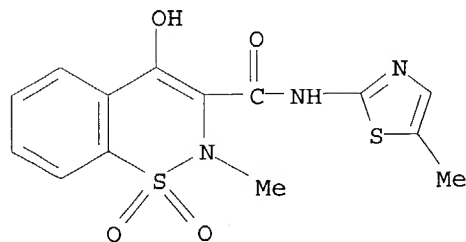
IT 71125-38-7, Meloxicam

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(COX-2-selective carprofen and related compds. for treating pain and inflammation in dogs, and comparative inhibition of COX-1 and -2 by carprofen and other NSAIDs)

RN 71125-38-7 HCAPLUS

CN 2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-, 1,1-dioxide (9CI) (CA INDEX NAME)



IT 71125-38-7, Meloxicam 120210-48-2, Tenidap 123653-11-2, NS-398

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(COX-2-selective carprofen and related compds. for treating pain and inflammation in dogs, and comparative inhibition of COX-1 and -2 by carprofen and other NSAIDs)

IT 59865-13-3, Cyclosporine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(COX-2-selective carprofen and related compds. for treating pain and inflammation in dogs, and use with other agents)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L199 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:562996 HCAPLUS

DOCUMENT NUMBER: 127:239123

TITLE: Combinations having immunosuppressive effects, containing cyclooxygenase-2-inhibitors and 5-lipoxygenase inhibitors

INVENTOR(S): Gregory, Susan A.; Isakson, Peter C.; Anderson, Gary

PATENT ASSIGNEE(S): G.D. Searle and Co., USA; Gregory, Susan A.; Isakson, Peter C.; Anderson, Gary

SOURCE: PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9729776	A1	19970821	WO 1997-US1558	19970212
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2246265	AA	19970821	CA 1997-2246265	19970212
AU 9718505	A1	19970902	AU 1997-18505	19970212
EP 888127	A1	19990107	EP 1997-904133	19970212
EP 888127	B1	20011212		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2000504723	T2	20000418	JP 1997-529363	19970212
AT 210461	E	20011215	AT 1997-904133	19970212
PT 888127	T	20020531	PT 1997-904133	19970212
ES 2169351	T3	20020701	ES 1997-904133	19970212
US 6376528	B1	20020423	US 1999-430072	19991018
US 2002143033	A1	20021003	US 2002-98644	20020315
PRIORITY APPLN. INFO.:				
			US 1996-600622	A1 19960213
			WO 1997-US1558	W 19970212
			US 1998-189463	B1 19981110
			US 1999-430072	A3 19991018

OTH  
AB

RPAT 127:239123

oxygenase-2 inhibitor and a 5-lipoxygenase inhibitor useful in reducing recipient rejection of d for treatment of autoimmune diseases. xyphenyl)-3-(difluoromethyl)-1H-pyrazol-1-and N'-[3-[5-(4-fluorophenoxy)-2-furyl]-1-methyl-2-

propynyl]-N'-hydroxyurea were prepared and a combination of these 2 compds. showed a delay in rejection time of skin grafts while treatment alone of each of these compds. resulted in no prolongation of graft survival.

IC ICM A61K045-06  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1, 15  
 IT 134470-38-5, BW-B 70C  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (BW-B 70C; cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)  
 IT 187112-47-6, R 840  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (R 840; cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)  
 IT 141579-67-1P, A-78773 169590-41-4P 170569-86-5P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)  
 IT 99-91-2, 4'-Chloroacetophenone 321-28-8, 2-Fluoroanisole 383-63-1, Ethyl trifluoroacetate 454-31-9, Ethyl difluoroacetate 27918-19-0, 4-Sulfonamidophenylhydrazine hydrochloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)  
 IT 455-91-4P, 3'-Fluoro-4'-methoxyacetophenone 18931-60-7P 170570-77-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)  
 IT 341-88-8, KF-8940 4737-26-2, Isoflavan 27686-84-6, Masoprocol 34334-69-5, Cirsiliol 36441-32-4, DuP-654 46721-85-1, CBS-1114 60284-71-1, AHR-5333 71125-38-7, Meloxicam 75139-38-7, Carbazomycin B 79916-77-1, Forsythiaside 80809-81-0, Docebenone 80937-31-1, Flosulide 87660-25-1, ONO 5349 88149-94-4, Dup 697 91431-42-4, Lonapalene 92532-05-3, Rev 5367 93014-16-5 93211-49-5, L-651392 96314-49-7, TEI-8005 96920-48-8, TMK 992 96928-53-9, TMK-919 99107-52-5, Bunaprolast 99134-29-9, L-651896 99318-09-9, QA-208-199 100035-75-4, Evandamine 101335-99-3, Eprovafen 101618-31-9, TMK 789 101619-08-3, TMK 781 101619-11-8, TMK-777 101910-24-1, PF-5901 102612-16-8, L-656224 103141-09-9, FPL 62064 103475-41-8, Tepoxalin 104007-80-9, TZI-41127 104153-37-9, Rilopirox 105357-17-3, SC-41661A 107008-29-7, L-652343 107746-52-1, E 5110 107889-32-7, LY-178002 110033-17-5, WY 47288 110406-33-2 110545-79-4, SCH 40120 111406-87-2, Zileuton 111525-11-2, A-63162 111908-94-2, SK&F-104351 111908-95-3, SK&F-104493 111974-60-8, WY-48252 112344-52-2, Flobufen 114832-13-2, CGS 8515 114917-95-2, BMY-30094 115255-10-2, ONO-LP 219 115255-23-7, ONO-LP 269 115816-05-2, BI-L-93BS 117574-40-0, CV-6504 118414-82-7, MK-886 118420-47-6, Tagorizine



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 187112-59-0, TZI-2721 187112-62-5, WAY-125007  
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 195215-52-2, RG 5901A

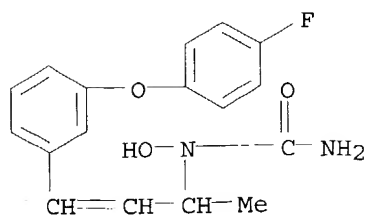
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with  
 immunosuppressive effects)

IT 134470-38-5, BW-B 70C

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (BW-B 70C; cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations  
 with immunosuppressive effects)

RN 134470-38-5 HCAPLUS

CN Urea, N-[3-[3-(4-fluorophenoxy)phenyl]-1-methyl-2-propenyl]-N-hydroxy-  
 (9CI) (CA INDEX NAME)



- IT **134470-38-5**, BW-B 70C  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (BW-B 70C; cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)
- IT **187112-47-6**, R 840  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (R 840; cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)
- IT **141579-67-1P**, A-78773 **169590-41-4P** **170569-86-5P**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)
- IT **99-91-2**, 4'-Chloroacetophenone **321-28-8**, 2-Fluoroanisole **383-63-1**, Ethyl trifluoroacetate **454-31-9**, Ethyl difluoroacetate **27918-19-0**, 4-Sulfonamidophenylhydrazine hydrochloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)
- IT **455-91-4P**, 3'-Fluoro-4'-methoxyacetophenone **18931-60-7P** **170570-77-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with immunosuppressive effects)
- IT **341-88-8**, KF-8940 **4737-26-2**, Isoflavan **27686-84-6**, Masoprocol **34334-69-5**, Cirsiliol **36441-32-4**, DuP-654 **46721-85-1**, CBS-1114 **60284-71-1**, AHR-5333 **71125-38-7**, Meloxicam **75139-38-7**, Carbazomycin B **79916-77-1**, Forsythiaside **80809-81-0**, Docebenone **80937-31-1**, Flosulide **87660-25-1**, ONO 5349 **88149-94-4**, Dup 697 **91431-42-4**, Lonapalene **92532-05-3**, Rev 5367 **93014-16-5** **93211-49-5**, L-651392 **96314-49-7**, TEI-8005 **96920-48-8**, TMK 992 **96928-53-9**, TMK-919 **99107-52-5**, Bunaprolast **99134-29-9**, L-651896 **99318-09-9**, QA-208-199 **100035-75-4**, Evandamine **101335-99-3**, Eprovafen **101618-31-9**, TMK 789 **101619-08-3**, TMK 781 **101619-11-8**, TMK-777 **101910-24-1**, PF-5901 **102612-16-8**, L-656224 **103141-09-9**, FPL 62064 **103475-41-8**, Tepoxalin **104007-80-9**, TZI-41127 **104153-37-9**, Rilopirox **105357-17-3**, SC-41661A **107008-29-7**, L-652343 **107746-52-1**, E 5110 **107889-32-7**, LY-178002 **110033-17-5**, WY 47288 **110406-33-2** **110545-79-4**, SCH 40120 **111406-87-2**, Zileuton **111525-11-2**, A-63162 **111908-94-2**, SK&F-104351 **111908-95-3**, SK&F-104493

111974-60-8, WY-48252 112344-52-2, Flobufen  
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187112-28-3, GR-80907 187112-30-7, HX 0386  
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187112-35-2, LY-280810 187112-36-3, MM-7002  
187112-41-0, P 8892 187112-42-1, P 8977  
187112-43-2, PD-136005 187112-44-3, PD-145246  
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187112-64-7, ZD 7717 187112-65-8, ZM-216800  
193739-23-0, CMI-392 195061-34-8 195065-56-6  
195065-57-7 195215-27-1, Carbazoycin C  
195215-52-2, RG 5901A

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cyclooxygenase-2 and 5-lipoxygenase inhibitor combinations with  
immunosuppressive effects)

L199 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:557660 HCAPLUS

DOCUMENT NUMBER: 127:239120

TITLE: Compositions comprising a cyclooxygenase-2 inhibitor

and a leukotriene B4 receptor antagonist for reducing transplant rejection

INVENTOR(S): Gregory, Susan A.; Isakson, Peter C.; Anderson, Gary  
 PATENT ASSIGNEE(S): G.D. Searle and Co., USA; Gregory, Susan A.; Isakson, Peter C.; Anderson, Gary  
 SOURCE: PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9729775	A1	19970821	WO 1997-US1422	19970211
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, <sup>MO</sup> , NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, <sup>TM</sup> , UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, RW: KE, LS, MW, SD, SZ, UG, IE, IT, LU, MC, NL, PT, MR, NE, SN, TD, TG				
CA 2246356	AA	19970821		19970211
AU 9722500	A1	19970902		19970211
EP 880362	A1	19981202		9970211
R: AT, BE, CH, DE, DK, ES, NL, SE, PT, IE, FI				
JP 2000505445	T2	20000509		19970211
US 6172096	B1	20010109	US 1998-75633	19980511
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US 2004106668	A1	20040603	US 2003-617222	20030710
PRIORITY APPLN. INFO.:				
			US 1996-600580	A1 19960213
			WO 1997-US1422	W 19970211
			US 1998-75633	A3 19980511
			US 2000-659299	A3 20000912

*Applicants*

OTHER SOURCE(S): MARPAT 127:239120

AB Treatment with a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist is described as being useful in reducing recipient rejection of transplanted organs and for treatment of autoimmune diseases.

IC ICM A61K045-06  
 ICS A61K031-00; A61K031-10; A61K031-18; A61K038-13

CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1, 2

IT 127378-46-5, CI 987  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (CI 987; compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

IT 170569-86-5P 195061-35-9P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

IT 32222-06-3, Calcitriol 59865-13-3, Cyclosporin a 60940-34-3, Ebselen 71125-38-7, Meloxicam 79217-60-0, Cyclosporin 80937-31-1, Flosulide 85259-71-8, BAY 0-8276 88149-94-4, Dup 697 93014-16-5 101910-24-1, PF-5901 110501-66-1, TMK-688 111908-95-3, SK&F-104493 117423-74-2, LY

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**195061-34-8** 195215-25-9, BPC 15 195215-47-5, MNX 160  
 195215-55-5, SR 2566

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

IT **99-91-2**, 4'-Chloroacetophenone **383-63-1**, Ethyl trifluoroacetate **454-31-9**, Ethyl difluoroacetate **27918-19-0**, 4-Sulfonamidophenyl hydrazine hydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

IT **455-91-4P**, 3'-Fluoro-4'-methoxyacetophenone **18931-60-7P** **170570-77-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

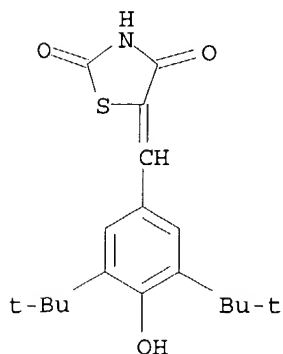
IT **127378-46-5**, CI 987

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(CI 987; compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

RN 127378-46-5 HCAPLUS

CN 2,4-Thiazolidinedione, 5-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]- (9CI) (CA INDEX NAME)



- IT 127378-46-5, CI 987  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(CI 987; compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)
- IT 170569-86-5P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)
- IT 59865-13-3, Cyclosporin a 71125-38-7, Meloxicam 79217-60-0, Cyclosporin 80937-31-1, Flosulide 88149-94-4, Dup 697 93014-16-5 101910-24-1, PF-5901 111908-95-3, SK&F-104493 118414-82-7, MK-886 123653-11-2, NS-398 128253-31-6, Bay-x-1005 130211-75-5, T-757 132734-43-1, LY 233569 133430-69-0, ETH-615 147030-01-1, MK-591 162011-90-7 169590-41-4 177660-77-4 177660-80-9 177660-92-3 181695-72-7 185344-51-8 185344-55-2 195061-34-8  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)
- IT 99-91-2, 4'-Chloroacetophenone 383-63-1, Ethyl trifluoroacetate 454-31-9, Ethyl difluoroacetate 27918-19-0, 4-Sulfonamidophenyl hydrazine hydrochloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)
- IT 455-91-4P, 3'-Fluoro-4'-methoxyacetophenone 18931-60-7P 170570-77-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(compns. comprising a cyclooxygenase-2 inhibitor and a leukotriene B4 receptor antagonist for reducing transplant rejection)

L199 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:174992 HCAPLUS

DOCUMENT NUMBER: 126:166479

TITLE: Compositions comprising a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor for the treatment of inflammatory disorders  
INVENTOR(S): Isakson, Peter A.

PATENT ASSIGNEE(S): G.D. Searle and

SOURCE: PCT Int. Appl.,

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9641626	A1	19961227	WO 1996-US10106	19960611

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN

CA 2224517 AA 19961227 CA 1996-2224517 19960611

AU 9661117 A1 19970109 AU 1996-61117 19960611

EP 833622 A1 19980408 EP 1996-918465 19960611

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI

JP 11507670 T2 19990706 JP 1997-503273 19960611

PRIORITY APPLN. INFO.:

US 1995-489472 A 19950612

WO 1996-US10106 W 19960611

OTHER SOURCE(S): MARPAT 126:166479

AB Combinations of a cyclooxygenase-2 inhibitor and a 5-lipoxygenase inhibitor are described for treatment of inflammation and inflammation-related disorders. Preparation of e.g. 4-[5-(4-chlorophenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide is described., as are pharmaceutical formulations and activity against collagen-induced arthritis in mice.

IC ICM A61K031-00

ICS A61K031-10; A61K031-18

CC 1-7 (Pharmacology)

Section cross-reference(s): 28, 63

IT 141579-54-6, A 76745

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(A 76745; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 187112-47-6, R 840 (Pharmaceutical)

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(R 840; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 170569-86-5P 186887-83-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 341-88-8, KF-8940 4737-26-2, Isoflavan

27686-84-6, Masoprocol 34334-69-5, Cirsiliol

36441-32-4, DuP-654 46721-85-1, CBS-1114 50847-11-5,

Ibutilast 60284-71-1, AHR-5333 71125-38-7, Meloxicam

75139-38-7, Carbazomycin B 78794-60-2 79916-77-1,

Forsythiaside 80809-81-0, Docebenone 87660-25-1, ONO

5349 91431-42-4, Lonapalene 92532-05-3, Rev 5367

93211-49-5, L-651392 96314-49-7, TEI-8005

96920-48-8, TMK 992 96928-53-9, TMK-919

99107-52-5, Bunaprolast 99134-29-9, L-651896

99318-09-9, QA-208-199 100035-75-4, Evandamine

101335-99-3, Eprovafen 101618-31-9, TMK 789

101619-08-3, TMK 781 101619-11-8, TMK-777

101910-24-1, PF-5901 102612-16-8, L-656224

103141-09-9, FPL 62064 103475-41-8, Tepoxalin

104007-80-9, TZI-41127 104153-37-9, Rilopirox

105357-17-3, SC-41661A 107008-29-7, L-652343

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 108073-62-7, Carbazomycin C 110033-17-5, WY 47288  
 110406-33-2, 110501-66-1, TMK-688 110545-79-4, SCH  
 40120 111406-87-2, Zileuton 111525-11-2, A 63162  
 111908-94-2, SK&F-104351 111908-95-3, SK&F-104493  
 111974-60-8, Wy-48252 112344-52-2, Flobufen  
 114832-13-2, CGS-8515 114917-95-2, BMY-30094  
 115255-10-2, ONO-LP 219 115255-23-7, ONO-LP 269  
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 121502-05-4, PD-127443 122454-69-7, SK&F-105809  
 122610-85-9, A-65260 123016-21-7, Wy-50295  
 123606-23-5, A-69412 123653-11-2, NS-398 125578-25-8  
 125721-82-6, BIL 226XX 125722-16-9, Enofelast  
 127245-22-1, BF-389 127378-46-5, CI 987  
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 134470-38-5, BW-B 70C 134822-78-9, CGS-23885  
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 150693-65-5, Lagunamycin 152784-11-7, WILD20 153950-29-9  
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 177660-54-7 177660-55-8 177660-56-9 177660-67-2 177660-72-9  
 177660-73-0 177660-76-3 177660-77-4 177660-78-5  
 177660-81-0 177660-85-4 177660-89-8 177660-92-3  
 177660-94-5 177661-00-6 177661-01-7 177661-02-8 177661-04-0  
 177661-06-2 177661-15-3 177661-17-5 177661-18-6 177661-19-7



177661-49-3 177662-22-5 177754-42-6 181627-94-1 181627-96-3  
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 181809-63-2 **185344-55-2** 186804-93-3 186887-75-2  
 186912-76-5, L 752860

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor  
 for treatment of inflammation and inflammation-related disorders,  
 compound preparation, antiarthritic activity and pharmaceutical compns.)

IT **187112-03-4**, A 72694 **187112-04-5**, A 80263  
**187112-09-0**, Bay-q 1531 **187112-10-3**, BF 397  
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**187112-23-8**, EN 105 **187112-24-9**, Floculide **187112-26-1**  
 , FPL 64170 **187112-28-3**, GR 80907 **187112-29-4**, HP 977  
**187112-30-7**, HX 0386 **187112-32-9**, L 691816  
**187112-33-0**, Linazolast **187112-35-2**, LY 280810  
**187112-36-3**, MM 7002 **187112-41-0**, P 8892  
**187112-42-1**, P 8977 **187112-43-2**, PD 136005  
**187112-44-3**, PD 145246 **187112-50-1**, RU 46057  
**187112-51-2**, RU 54808 **187112-52-3**, SL 81-0433  
**187112-54-5**, SS 810H **187112-56-7**, Tanabe 757 **187112-57-8**,  
 Tanabe 799 **187112-58-9**, TMK 685 **187112-59-0**, TZI 2721  
**187112-62-5**, WAY 125007 **187112-64-7**, ZD 7717  
**187112-65-8**, ZM 216800 **193739-23-0**, CMI 392

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor  
 for treatment of inflammation and inflammation-related disorders,  
 compound preparation, antiarthritic activity and pharmaceutical compns.)

IT **455-91-4P 18931-60-7P 170570-77-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction; cyclooxygenase-2 inhibitor combination with  
 5-lipoxygenase inhibitor for treatment of inflammation and  
 inflammation-related disorders, compound preparation, antiarthritic activity  
 and pharmaceutical compns.)

IT **99-91-2**, 4'-Chloroacetophenone **321-28-8**, 2-Fluoroanisole  
**383-63-1**, Ethyl trifluoroacetate **454-31-9**, Ethyl  
 difluoroacetate **27918-19-0**, 4-Sulfonamidophenylhydrazine  
 hydrochloride

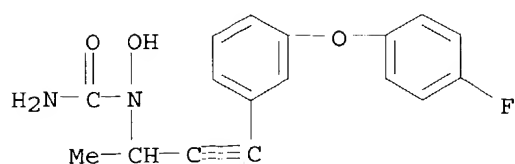
RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase  
 inhibitor for treatment of inflammation and inflammation-related  
 disorders, compound preparation, antiarthritic activity and pharmaceutical  
 compns.)

IT **141579-54-6**, A 76745

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (A 76745; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase  
 inhibitor for treatment of inflammation and inflammation-related  
 disorders, compound preparation, antiarthritic activity and pharmaceutical  
 compns.)

RN 141579-54-6 HCAPLUS

CN Urea, N-[3-[3-(4-fluorophenoxy)phenyl]-1-methyl-2-propynyl]-N-hydroxy-  
 (9CI) (CA INDEX NAME)



IT 141579-54-6, A 76745

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(A 76745; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 187112-47-6, R 840 (Pharmaceutical)

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(R 840; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 170569-86-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor for treatment of inflammation and inflammation-related disorders, compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 341-88-8, KF-8940 4737-26-2, Isoflavan  
27686-84-6, Masoprocol 34334-69-5, Cirsiliol  
36441-32-4, DuP-654 46721-85-1, CBS-1114  
60284-71-1, AHR-5333 71125-38-7, Meloxicam  
75139-38-7, Carbazomycin B 79916-77-1, Forsythiaside  
80809-81-0, Docebenone 87660-25-1, ONO 5349  
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99107-52-5, Bunaprolast 99134-29-9, L-651896  
99318-09-9, QA-208-199 100035-75-4, Evandamine  
101335-99-3, Eprovafen 101618-31-9, TMK 789  
101619-08-3, TMK 781 101619-11-8, TMK-777  
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120210-48-2, Tenidap 120602-97-3, RG-6866  
121135-51-1, 210-610 121412-39-3, CGS-21595  
121502-05-4, PD-127443 122454-69-7, SK&F-105809  
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123606-23-5, A-69412 123653-11-2, NS-398

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 127481-38-3, L-674636 128253-31-6, Bay-x-1005  
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 130838-15-2, Y-19432 131817-86-2, CGS 22745  
 132392-65-5, LY-269415 132734-43-1, LY-233569  
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 133430-69-0, ETH-615 134470-36-3, BW-B 218C  
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 154355-76-7, ABT 761 155944-23-3, ZM 230487  
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 187112-44-3, PD 145246 187112-50-1, RU 46057  
 187112-52-3, SL 81-0433 187112-54-5, SS 810H  
 187112-58-9, TMK 685 187112-59-0, TZI 2721  
 187112-62-5, WAY 125007 187112-64-7, ZD 7717  
 187112-65-8, ZM 216800 193739-23-0, CMI 392

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (cyclooxygenase-2 inhibitor combination with 5-lipoxygenase inhibitor  
 for treatment of inflammation and inflammation-related disorders,  
 compound preparation, antiarthritic activity and pharmaceutical compns.)

IT 455-91-4P 18931-60-7P 170570-77-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction; cyclooxygenase-2 inhibitor combination with  
 5-lipoxygenase inhibitor for treatment of inflammation and  
 inflammation-related disorders, compound preparation, antiarthritic activity  
 and pharmaceutical compns.)

IT 99-91-2, 4'-Chloroacetophenone 321-28-8, 2-Fluoroanisole  
 383-63-1, Ethyl trifluoroacetate 454-31-9, Ethyl  
 difluoroacetate 27918-19-0, 4-Sulfonamidophenylhydrazine  
 hydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction; cyclooxygenase-2 inhibitor combination with 5-lipoxygenase  
 inhibitor for treatment of inflammation and inflammation-related  
 disorders, compound preparation, antiarthritic activity and pharmaceutical  
 compns.)

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:14:06 ON 30 JUL 2004  
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FILE COVERS 1907 - 30 Jul 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l100 not l199  
L200 9 L100 NOT L199

=> FIL STNGUIDE  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION

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LAST RELOADED: Jul 23, 2004 (20040723/UP).

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L200 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:617977 HCAPLUS

DOCUMENT NUMBER: 127:257644

TITLE: **Combination** therapeutic methods employing  
nitric oxide scavengers and inhibitors of nitric oxide  
synthase-inducing species, and **compositions**  
useful therefor

INVENTOR(S): Lai, Ching-San

PATENT ASSIGNEE(S): Medinnox, Inc., USA; Lai, Ching-San

SOURCE: PCT Int. Appl., 44 pp.

DOCUMENT TYPE: CODEN: PIXXD2  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 2 English  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9732585	A1	19970912	WO 1997-US4131	19970305 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2238029	AA	19970912	CA 1997-2238029	19970305 <--
AU 9722131	A1	19970922	AU 1997-22131	19970305 <--
JP 2000506170	T2	20000523	JP 1997-532042	19970305 <--
AU 9869984	A1	19980730	AU 1998-69984	19980609 <--
AU 722361	B2	20000803		

## PRIORITY APPLN. INFO.:

US 1996-12820P P 19960305 <--  
 US 1995-561594 A 19951121 <--  
 WO 1997-US4131 W 19970305

OTHER SOURCE(S): MARPAT 127:257644

AB In accordance with the present invention, there are provided **combination** therapeutic methods for the in vivo inactivation or inhibition of formation (either directly or indirectly) of species which induce the expression of nitric oxide synthase, as well as reducing nitric oxide levels produced as a result of NO synthase expression. In contrast to the inhibitory approach described in the prior art (i.e., wherein the function of the enzymes responsible for nitric oxide production is inhibited), the present invention employs a **combination** of inactivation (or inhibition) and a scavenging approach whereby the stimulus of nitric oxide synthase expression is inactivated, or the production thereof is inhibited, and overproduced nitric oxide is bound in vivo to a suitable nitric oxide scavenger. The resulting complexes render the stimulus of nitric oxide synthase expression inactive (or inhibit the production thereof), and nitric oxide harmless. The resulting complexes are eventually excreted in the urine of the host. In another aspect, the present invention relates to reducing elevated nitric oxide levels associated with infectious and/or inflammatory conditions (and the treatment thereof), employing a **combination** therapeutic method wherein an agent for the treatment of the infectious and/or inflammatory condition is co-administered along with a dithiocarbamate compound as a scavenger of overproduced nitric oxide. Further in accordance with the present invention, there are provided **compns.** and formulations useful for carrying out the above-described methods.

IC ICM A61K031-495  
 ICS A61K031-44; A61K031-50; A61K038-00; A61K045-05; A01N043-58; A01N043-60; A01N043-42; C07K016-00; C12P021-08

CC 1-12 (Pharmacology)

Section cross-reference(s): 63

ST nitric oxide scavenger **combination** therapeutic; dithiocarbamate compd NO scavenger **combination** therapeutic; NO synthase inducer inhibitor **combination** therapeutic

IT Proteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

- (Uses)  
(BPI (bactericidal/permeability-increasing); nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Intestine, disease  
(Crohn's, therapeutic agents for; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Complement  
(activation, inhibitors; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interleukin 1 receptors  
Platelet-activating factor receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antagonists; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interleukin 6  
Tumor necrosis factors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibodies to; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Peptides, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(bradykinin receptor-blocking; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Ion channel blockers  
(calcium, dihydropyridine; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Blood coagulation  
(cascade, inhibitors; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(emulsions; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Toxins  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(endotoxins; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(enteric-coated; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Pancreatic islet of Langerhans  
(free or encapsulated; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(inhalants; nitric oxide scavengers with inhibitors of nitric oxide

- synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(injections, i.v.; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(injections, s.c.; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Proteins, specific or class  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(lipopolysaccharide-binding, antibodies to; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(liposomes; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(liqs., dispersions; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(micelles; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Antibodies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(monoclonal, OKT3; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Anti-inflammatory agents  
Antidiabetic agents  
Bacteria (Eubacteria)  
Drug delivery systems  
Immunosuppressants  
Radical scavengers  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Blood-coagulation factors  
Bradykinin receptors  
Cytokine receptors  
Cytokines  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Corticosteroids, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)

- IT Interleukin 10  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interleukin 13  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interleukin 4  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Prostaglandins  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Leukotriene antagonists  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(oral; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(parenterals; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(rectal; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT CD14 (antigen)  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(soluble protein; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Tumor necrosis factor receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(soluble; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems



- (solids; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Drug delivery systems  
(solns.; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Quaternary ammonium compounds, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(tetraalkyl, with dithiocarbamate derivs.; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Antibodies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(to cytokines and other substances; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Complement receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(type 1, soluble; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Transforming growth factors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\beta$ -; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interferons  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\gamma$ , antibodies to; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT Interferon receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\gamma$ -interferon, soluble; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 9001-30-3, Blood-coagulation factor XII 80295-54-1, Complement C5a  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibodies to; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 9025-82-5, Phosphodiesterase 9029-60-1, **Lipoxygenase**  
39391-18-9, **Cyclooxygenase** 57576-52-0, Thromboxane A2  
80295-70-1, C1 Esterase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitors**; nitric oxide scavengers with **inhibitors** of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 506-32-1

- RL: BSU (Biological study, unclassified); BIOL (Biological study) (metabolites; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 140608-64-6, Muromonab CD3  
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 58-82-2, Bradykinin 65154-06-5, Blood platelet activating factor  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 50-44-2, 6-Mercaptopurine 50-78-2, Aspirin 79-17-4, Aminoguanidine 89-57-6, Mesalamine 443-48-1, Metronidazole 446-86-6, Azathioprine 513-74-6D, Ammonium dithiocarbamate, derivs. 599-79-1, Sulfasalazine 867-44-7 1404-26-8, Polymyxin B 4384-81-0D, Sodium dithiocarbamate, derivs. 7439-89-6D, Iron, dithiocarbamate complexes, biological studies 7439-96-5D, Manganese, dithiocarbamate complexes, biological studies 7440-48-4D, Cobalt, dithiocarbamate complexes, biological studies 7440-50-8D, Copper, dithiocarbamate complexes, biological studies 9004-10-8, Insulin, biological studies 59865-13-3, **Cyclosporin** A 104987-11-3, FK506 106602-62-4, Amylin 160525-37-1  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 10102-43-9, Nitric oxide, biological studies 125978-95-2, Nitric oxide synthase  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)
- IT 594-07-0D, Dithiocarbamic acid, derivs.  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitric oxide-scavenging; nitric oxide scavengers with inhibitors of nitric oxide synthase-inducing species for **combination** therapeutic methods and **compns.**)

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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 8 ANSWERS - CONTINUE? Y/(N):y

L200 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1997:450109 HCAPLUS  
DOCUMENT NUMBER: 127:60628  
TITLE: **Combination** therapeutic methods employing  
nitric oxide scavengers

INVENTOR(S): Lai, Ching-San  
 PATENT ASSIGNEE(S): Medinox, Inc., USA; Lai, Ching-San  
 SOURCE: PCT Int. Appl., 62 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9718805	A1	19970529	WO 1996-US18124	19961112 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5747532	A	19980505	US 1995-561594	19951121 <--
CA 2238028	AA	19970529	CA 1996-2238028	19961112 <--
AU 9676784	A1	19970611	AU 1996-76784	19961112 <--
EP 866695	A1	19980930	EP 1996-939670	19961112 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1202824	A	19981223	CN 1996-198435	19961112 <--
CN 1096855	B	20021225		
JP 2000500493	T2	20000118	JP 1997-519776	19961112 <--
TW 516957	B	20030111	TW 1996-85114207	19961119 <--
AU 9869984	A1	19980730	AU 1998-69984	19980609 <--
AU 722361	B2	20000803		

## PRIORITY APPLN. INFO.:

US 1995-561594 A2 19951121 <--  
 US 1996-12820P P 19960305 <--  
 WO 1996-US18124 W 19961112 <--

OTHER SOURCE(S): MARPAT 127:60628

AB **Combination** therapeutic methods are provided for the in vivo inactivation or inhibition of formation (either directly or indirectly) of species which induce the expression of nitric oxide synthase, as well as reducing nitric oxide levels produced as a result of NO synthase expression. In contrast to the inhibitory approach described in the prior art (i.e., wherein the function of the enzymes responsible for nitric oxide production is inhibited), the present invention employs a **combination** of inactivation (or inhibition) and scavenging approaches, whereby the stimulus of nitric oxide synthase expression is inactivated, or the production thereof is inhibited, and overproduced nitric oxide is bound in vivo to a suitable nitric oxide scavenger. The resulting complexes render the stimulus of nitric oxide synthase expression inactive (or inhibit the production thereof), and nitric oxide harmless. The resulting complexes are eventually excreted in the urine of the host. Also provided are **compns.** and formulations useful for carrying out the above methods.

ICM A61K031-325

CC 1-12 (Pharmacology)

Section cross-reference(s): 63

ST NO synthase inhibitor **combination** therapeutic; nitric oxide scavenger **combination** therapeutic

IT Proteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)  
 (BPI (bactericidal/permeability-increasing); nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Intestine, disease  
 (Crohn's, therapeutic agents for; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Complement  
 (activation, inhibitors; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Transplant and Transplantation  
 Transplant and Transplantation  
 (allotransplant, heart; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Heart  
 Heart  
 (allotransplant; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Interleukin 1 receptors  
 Platelet-activating factor receptors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (antagonists; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Interleukin 6  
 Tumor necrosis factors  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Tear (ocular fluid)  
 (artificial; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Ion channel blockers  
 Ion channel blockers  
 (calcium, dihydropyridine; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
 (drops; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
 (emulsions; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Toxins  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (endotoxins; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
 (inhalants; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
 (injections, i.v.; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
 (injections, s.c.; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

IT Proteins, specific or class  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (iron-containing; nitric oxide-scavenging and nitric oxide

- synthase-inhibiting **combinations** for therapeutic use)
- IT Proteins, specific or class  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (lipopolysaccharide-binding, soluble; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Drug delivery systems  
 (liposomes; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Drug delivery systems  
 (liqs., dispersions; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Antibodies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (monoclonal, OKT3; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Anti-inflammatory agents  
 Anticoagulants  
 Antidiabetic agents  
 Antihypotensives  
 Bacteria (Eubacteria)  
 Drug delivery systems  
 Drugs  
 Immunosuppressants  
 Pancreatic islet of Langerhans  
 Scavengers  
 Transplant rejection  
 (nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Antibiotics  
 Antibodies  
 Corticosteroids, biological studies  
 Interleukin 10  
 Interleukin 13  
 Interleukin 4  
 Metalloporphyrins  
 Porphyrins  
 Prostaglandins  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Blood-coagulation factors  
 Bradykinin receptors  
 Cytokine receptors  
 Cytokines  
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Leukotriene antagonists  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)
- IT Peptides, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(non-heme iron-containing; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
(ophthalmic; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
(oral; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Drug delivery systems  
(parenterals; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Drug delivery systems  
(rectal; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Shock (circulatory collapse)  
(septic; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT CD14 (antigen)  
Tumor necrosis factor receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(soluble; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Drug delivery systems  
(solids; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Drug delivery systems  
(solns.; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Eye, disease  
(therapeutic agents for; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Globulins, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(thymoglobulin; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Complement receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(type 1, soluble; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Transition metal complexes  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(with dithiocarbamates; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)

IT Transforming growth factors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
( $\beta$ -; nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT Interferons

- RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\gamma$ , antibodies to; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)
- IT Interferon receptors  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
( $\gamma$ -interferon, soluble; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)
- IT 9001-30-3, Blood coagulation factor XII 80295-54-1, Complement C5a  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibodies to; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)
- IT 9025-82-5, Phosphodiesterase 9029-60-1, **Lipoxygenase**  
39391-18-9, **Cyclooxygenase** 57576-52-0, Thromboxane A2  
80295-70-1, C1 Esterase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitors**; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic  
use)
- IT 506-32-1  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(metabolites; nitric oxide-scavenging and nitric oxide  
synthase-inhibiting **combinations** for therapeutic use)
- IT 140608-64-6, Muromonab CD3  
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)
- IT 50-02-2 50-24-8, Prednisolone 50-33-9, Phenylbutazone, biological  
studies 50-44-2, 6-Mercaptopurine 50-78-2, Aspirin 53-86-1,  
Indomethacin 59-66-5, Acetazolamide 70-51-9, Desferrioxamine  
79-17-4, Aminoguanidine 83-43-2, Methylprednisolone 89-57-6,  
Mesalamine 92-13-7, Pilocarpine 443-48-1, Metronidazole 446-86-6,  
Azathioprine 512-15-2, Cyclopentolate 594-07-0D, Dithiocarbamic acid,  
dithiocarbamates 599-79-1, Sulfasalazine 737-86-0, Pyridoxal  
isonicotinoyl hydrazone 867-44-7 1404-26-8, Polymyxin B 2418-14-6,  
Dimercaptosuccinic acid 4428-95-9, Foscarnet 7439-89-6D, Iron,  
dithiocarbamate complexes, biological studies 7439-96-5D, Manganese,  
dithiocarbamate complexes, biological studies 7440-48-4D, Cobalt,  
dithiocarbamate complexes, biological studies 7440-50-8D, Copper,  
dithiocarbamate complexes, biological studies 9004-10-8, Insulin,  
biological studies 12678-01-2, Phenanthroline 22664-55-7, Metipranolol  
24280-93-1, Mycophenolic acid 24584-09-6, ICRF-187 26839-75-8, Timolol  
30652-11-0, 1,2-Dimethyl-3-hydroxypyrid-4-one 47141-42-4, Levobunolol  
53774-63-3 53882-12-5, Lodoxamide 73384-59-5, Ceftriaxone  
79217-60-0, **Cyclosporin** 82410-32-0, Ganciclovir 94161-07-6,  
N-Methyl-D-glucamine dithiocarbamate 94161-07-6D, N-Methyl-D-glucamine  
dithiocarbamate, iron complexes 104987-11-3, FK506 106602-62-4, Amylin  
160525-37-1  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)
- IT 58-82-2, Bradykinin 10102-43-9, Nitric oxide, biological studies  
65154-06-5, Platelet-activating factor 125978-95-2, Nitric oxide  
synthase  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)

(nitric oxide-scavenging and nitric oxide synthase-inhibiting  
**combinations** for therapeutic use)

IT 69-72-7, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(salicylates; nitric oxide-scavenging and nitric oxide synthase-inhibiting **combinations** for therapeutic use)

L200 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:727025 HCAPLUS

DOCUMENT NUMBER: 126:112898

TITLE: The NF- $\kappa$ B inhibitor, tepoxalin, suppresses surface expression of the cell adhesion molecules CD62E, CD11b/CD18 and CD106

AUTHOR(S): Lee, Daniel H. S.; Tam, Susanna S. C.; Wang, Elizabeth; Taylor, Gareth R.; Plante, Richard K.; Lau, Catherine Y.

CORPORATE SOURCE: The R.W. Johnson Pharmaceutical Research Institute, 19 Green Belt Drive, Don Mills, Ontario, M3C 1L9, Can.

SOURCE: Immunology Letters (1996), 53(2,3), 109-113

CODEN: IMLED6; ISSN: 0165-2478

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tepoxalin, a dual enzyme inhibitor of cyclooxygenase and 5-lipoxygenase has been shown to inhibit T-cell activation. Its immunosuppressive property is distinct from cyclosporin because only tepoxalin, but not cyclosporin, suppresses NF- $\kappa$ B activation. Here the authors report that tepoxalin selectively inhibits intercellular adhesion mol.-1 (ICAM-1, CD54)/MAC-1 (CD11b/CD18) dependent adhesion of polymorphonuclear cells to IL-1 activated human umbilical vein endothelial cells. The mechanism of inhibition is related to the surface expression of several cell adhesion mols. Flow cytometry analyses on cultured cells that were treated with tepoxalin or antisense oligonucleotides to the p65/p50 subunit of NF- $\kappa$ B, and then stimulated with PMA, revealed a reduced expression of CD11b/CD18 on monocytic HL60 cells, and endothelial adhesion mol.-1 (CD62E) and vascular adhesion mol.-1 (CD106) on human umbilical vein endothelial cells. Expression of other adhesion mols. such as lymphocyte function associated-antigen-1 (CD11a/CD18) and CD54 were unaffected. Tepoxalin also inhibited the secretion of a NF- $\kappa$ B regulated chemokine, IL-8, a known inducer of CD11b/CD18 expression. Thus the suppression of CD11b/CD18 expression by tepoxalin may involve IL-8. The results suggest that by inhibiting NF- $\kappa$ B activation, surface expression of several adhesion mols. can be modulated and that tepoxalin may be useful in treating selected adhesion mediated events such as leukocyte migration or atherosclerotic plaque formation.

CC 1-7 (Pharmacology)

IT Polymorphonuclear leukocyte

(NF- $\kappa$ B inhibitor tepoxalin suppresses surface expression of cell adhesion mols. CD62E and CD11b/CD18 and CD106 in relation to inhibition of polymorphonuclear cells to vascular endothelium and IL-8 secretion)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L200 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:865559 HCAPLUS

DOCUMENT NUMBER: 123:306186

TITLE: Tepoxalin, a novel immunomodulatory compound,



**synergizes** with CSA in suppression of graft-versus-host reaction and allogeneic skin graft rejection

AUTHOR(S): Fung-Leung, Wai-Ping; Pope, Barbara L.; Chourmouzis, Erika; Panakos, Julie A.; Lau, Catherine Y.

CORPORATE SOURCE: R.W. Johnson Pharmaceutical Research Institute, Don Mills, ON, M3C 1L9, Can.

SOURCE: Transplantation (1995), 60(4), 362-8  
CODEN: TRPLAU; ISSN: 0041-1337

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tepoxalin, a **dual 5-lipoxygenase and cyclooxygenase inhibitor** with nonsteroidal antiinflammatory effects, has recently been shown to suppress NFkB transactivation and **inhibit** T cell proliferation via a mechanism very different from **cyclosporine** (CsA). In this report, we demonstrate that this novel immunosuppressive effect of tepoxalin is manifested in in vivo transplantation models. Tepoxalin suppressed murine spleen cell proliferation in a **mixed** lymphocyte reaction (MLR) with an IC50 of 1.3 µM. Coadministration of tepoxalin and CsA in MLR cultures showed an additive **inhibitory** effect. Oral administration of tepoxalin at 12 mg/kg/day to mice suppressed local graft-vs.-host (GVH) responses by about 40% (n=10). **Combination** of tepoxalin and CsA at suboptimal doses **synergized** their immunosuppressive effects on GVH responses (n=20). In skin transplantation, the median survival time of allogeneic BALB/cByJ (H-2d) mouse skin grafted onto C3H/HeJ (H-2k) mice was 10.5 days (n=8), and was prolonged to 15.0 days (n=9) for recipient mice administered tepoxalin at 50 mg/kg/day. Coadministration of suboptimal doses of tepoxalin (12.5 mg/kg/day) and CsA (50 mg/kg/day) prolonged skin graft rejections dramatically (55% of the grafts survived for more than 40 days, n=9). Taken together, these results demonstrate that tepoxalin is a potent immunomodulatory compound that, when **combined** with CsA, provides **synergistic** immunosuppressive activity. The fact that tepoxalin and CsA act on different transcription factors, NFkB and NFAT resp., might explain the **synergistic** suppressive effects when both compds. were used. Tepoxalin could be an important addition to the cohort of immunosuppressive therapies currently used in solid organ and bone marrow transplantations.

CC 1-7 (Pharmacology)

ST tepoxalin **synergism cyclosporine** immunosuppressant transplantation

IT **Immunosuppressants**  
Lymphocyte  
Transplant and Transplantation  
(tepoxalin **synergistic** interaction with **cyclosporine** as immunosuppressants in graft-vs.-host reaction and allogeneic skin graft rejection)

IT Drug interactions  
(**synergistic**, tepoxalin **synergistic** interaction with **cyclosporine** as immunosuppressants in graft-vs.-host reaction and allogeneic skin graft rejection)

IT 59865-13-3, **Cyclosporin A** 103475-41-8, Tepoxalin  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(tepoxalin **synergistic** interaction with **cyclosporine** as immunosuppressants in graft-vs.-host reaction and allogeneic skin graft rejection)

L200 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:260855 HCAPLUS

DOCUMENT NUMBER: 120:260855

TITLE:  $\alpha$ -Tocopherol prevents **cyclosporin**  
A-mediated activation of phospholipase A2 and  
inhibition of Na<sup>+</sup>, K<sup>+</sup>-ATPase activity in cultured  
hamster renal tubular cells

AUTHOR(S): Anderson, Ronald; Van Rensburg, Constance E. J.; Myer,  
Martin S.

CORPORATE SOURCE: Inst. Pathol., Univ. Pretoria, Pretoria, 0001, S. Afr.  
SOURCE: Toxicology and Applied Pharmacology (1994),  
125(2), 176-83

CODEN: TXAPA9; ISSN: 0041-008X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB At concns. of 0.5  $\mu$ M and upward, **cyclosporin** A (CsA) caused dose-related **inhibition** of the growth of a hamster renal tubular cell line (HAK ATCC; CCL15) in vitro. **Inhibition** of cell growth was due to the cytotoxic properties of CsA which were associated with enhancement of activity of phospholipase A2 (PLA2) according to the increased generation of arachidonic acid and lysophosphatidylcholine (LPC). Arachidonate per se, at concns. of up to 20  $\mu$ M, did not affect the growth of HAK cells, while **cyclooxygenase** and 5-**lipooxygenase inhibitors** failed to protect the cells against the antiproliferative effects of CsA. However, LPC caused dose-related **inhibition** of the growth of HAK cells. Moreover, coinubation with lysophospholipase or  $\alpha$ -tocopherol (AT, vitamin E), a PLA2 **inhibitory** and lysophospholipid-complexing agent, protected the HAK cells against both CSA and LPC. The Na<sup>+</sup>, K<sup>+</sup>-ATPase activity of Hak cells was also **inhibited** by CsA, with the enzyme being protected by inclusion of AT or lysophospholipase. Increased activity of PLA2 and **inhibition** of Na<sup>+</sup>, K<sup>+</sup>-ATPase preceded cytotoxicity and cytolysis. Excessive production of lysophospholipids and consequent **inhibition** of Na<sup>+</sup>, K<sup>+</sup>-ATPase in renal tubular cells is a possible mechanism of CsA-induced nephrotoxicity. The protective effects of AT suggest that this agent may be clin. useful in preventing the renal side effects of CsA.

CC 1-7 (Pharmacology)

ST tocopherol **cyclosporine** phospholipase A2 ATPase nephrotoxicity

IT Kidney, toxic chemical and physical damage  
(**cyclosporin** A toxicity to, potassium-sodium-dependent ATPase and phospholipase A2 change in,  $\alpha$ -tocopherol prevention of)

IT Kidney, **composition**  
(potassium-sodium-dependent ATPase and phospholipase A2 of, **cyclosporin** A-mediated change in,  $\alpha$ -tocopherol prevention of)

IT 9001-84-7, Phospholipase A2

RL: BIOL (Biological study)

(**cyclosporin** A-mediated activation of kidney,  $\alpha$ -tocopherol prevention of)

IT 58-95-7,  $\alpha$ -Tocopherol acetate 59-02-9,  $\alpha$ -Tocopherol

9001-85-8, Lysophospholipase

RL: BIOL (Biological study)

(**cyclosporin** A-mediated activation of phospholipase A2 and inhibition of sodium, potassium-ATPase in kidney prevention by)

IT 59865-13-3, **Cyclosporin** A

RL: BIOL (Biological study)

(phospholipase A2 activation and sodium, potassium-ATPase inhibition in kidney mediation by,  $\alpha$ -tocopherol prevention of)

IT 9000-83-3, ATPase  
 RL: BIOL (Biological study)  
 (potassium-sodium-dependent, **cyclosporin A**-mediated  
 inhibition of kidney,  $\alpha$ -tocopherol prevention of)

L200 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:332 HCAPLUS

DOCUMENT NUMBER: 114:332

TITLE: Comparative actions of immunosuppressants,  
 glucocorticoids and nonsteroidal anti-inflammatory  
 drugs on various models of delayed hypersensitivity  
 and on a nonimmune inflammation in mice

AUTHOR(S): Tarayre, J. P.; Barbara, M.; Aliaga, M.;  
 Tisne-Versailles, J.

CORPORATE SOURCE: Dep. Pharmacol., P. Fabre Res. Cent., Castres,  
 F-81106, Fr.

SOURCE: Arzneimittel-Forschung (1990), 40(10),  
 1125-31  
 CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Various models of delayed hypersensitivity (DH) were used in mice: contact  
 hypersensitivity reactions to picryl chloride and oxazolone and reactions  
 to methylated bovine serum albumin (MBSA) and sheep red blood cells  
 (SRBC). Drugs of different classes were tested in these models by  
 systemic treatment around the challenge period: non-steroidal  
 anti-inflammatory drugs (**cyclooxygenase inhibitors**,  
 and **inhibitors** of both **cyclooxygenase** and  
**lipooxygenase**); glucocorticoids and immunosuppressants (  
**cyclosporin A**, CsA; cyclophosphamide, Cy; methotrexate, Mtx;  
 azathioprine, Aza). These compds. were also studied and compared for  
 their effects on the 3-h and 24-h phase of the carrageenin mouse-paw edema  
 (in which inflammation is maximal after 24 h). Non-steroidal  
 anti-inflammatory drugs (including double **inhibitors** of  
**cyclooxygenase** and **lipooxygenase**) had little or no effect  
 on DH models, except indomethacin. Glucocorticoids **inhibited**  
 all immune reactions except that to MBSA. Of the immunosuppressants, CsA  
 reduced all the DH reactions while Aza mainly reduced the reaction to  
 SRBC; Cy and Mtx were mainly active on SRBC and MBSA inflammations. On  
 the other hand CsA, Cy, and Mtx were inactive on the 3-h phase but  
 decreased the 24-h phase of carrageenin edema. At doses active on the DH  
 models and on carrageenin inflammation, Cy induced a lasting blood  
 leukopenia, but CsA and Mtx did not. This **combination** of tests  
 in the mouse seems to be of interest to demonstrate any action on DH and  
 any antiinflammatory effect and to suggest whether these activities are  
 related to a possible leukopenia effect. CsA and Mtx, which reduced DH  
 reactions with anti-inflammatory effect on the 24-h phase of the  
 carrageenin-induced edema without major leukopenia action, appeared the  
 most interesting immunosuppressants in these tests.

CC 1-7 (Pharmacology)

Section cross-reference(s): 2

IT 50-03-3, Hydrocortisone acetate 50-18-0, Cyclophosphamide 50-33-9,  
 Phenylbutazone, biological studies 50-78-2 52-21-1, Prednisolone  
 acetate 53-86-1, Indomethacin 59-05-2, Methotrexate 92-43-3,  
 Phenidone 124-94-7, Triamcinolone 360-63-4, Betamethasone phosphate  
 446-86-6, Azathioprine 638-94-8, Desonide 1177-87-3, Dexamethasone  
 acetate 5104-49-4, Flurbiprofen 22204-53-1, Naproxen 36322-90-4,  
 Piroxicam 59865-13-3, **Cyclosporin A** 66000-40-6

RL: BIOL (Biological study)  
 (delayed hypersensitivity and nonimmune inflammation response to)

L200 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:53482 HCAPLUS  
DOCUMENT NUMBER: 112:53482  
TITLE: Potent inhibition of interleukin 1 $\beta$ -mediated human melanoma (A375.6) lysis by corticosteroids, staurosporine, and tilorone  
AUTHOR(S): Schultz, Richard M.; Howbert, J. Jeffry; Archer, Robert A.  
CORPORATE SOURCE: Dep. Immunol. Res. Chem., Cancer, Virol. Res., Lilly Corp. Cent., Indianapolis, IN, 46285, USA  
SOURCE: Immunopharmacology and Immunotoxicology (1989), 11(2-3), 489-506  
CODEN: IITOF; ISSN: 0892-3973  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The mechanism of human interleukin (IL)-1 $\beta$ -mediated cytolysis was studied in a human melanoma cell line, A375.6. Purified **recombinant** human IL-1 $\beta$  produced 50% cytotoxic activity at 50 pg/mL. A variety of compds. were tested for their ability to interfere with A375.6 lysis. Compds. were added simultaneously with IL-1 $\beta$  (100 pg/mL), and tumor cytolysis was measured after 72 h of culture by release of 125I from DNA of A375.6 cells labeled with [125I]-dUrd. A variety of anti-inflammatory/immunosuppressive agents (including auranofin, chloroquine, **cyclosporin A**, d-penicillamine) and several **cyclooxygenase/lipoxygenase inhibitors** (AA-861, BW755c, and indomethacin) lacked protective activity. Similarly, phospholipase **inhibitors** (mepacrine and 4-bromophenacyl bromide), putrescine, **inhibitors** of lysosomal activity (chloroquine and NH<sub>4</sub>Cl), Ca channel **blockers** (nifedipine and verapamil), calmodulin **inhibitors** (W-7 and calmidazolium), and **inhibitors** of ADP ribosylation (nicotinamide and 3-aminobenzamide) were inactive. In contrast, corticosteroids (dexamethasone, hydrocortisone, and paramethasone acetate), tilorone, and protein kinase C **inhibitors** (1-[5-isoquinolinyl-sulfonyl]-2-methylpiperazine and staurosporine) **inhibited** IL-1 $\beta$ -mediated A375.6 cytolysis. These compds. also interfered with tumor necrosis factor-mediated lysis of A375.6, suggesting common mechanisms of tumor cytotoxicity by these monokines. This model may be useful for delineating intracellular biochem. events integral to IL-1 action.

CC 15-5 (Immunochemistry)

L200 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:433265 HCAPLUS  
DOCUMENT NUMBER: 111:33265  
TITLE: Effects of anti-inflammatory drugs on interleukin 1-induced cartilage proteoglycan resorption in vitro: inhibition by aurothiophosphines but no influence from perturbed eicosanoid metabolism  
AUTHOR(S): Rainsford, K. D.  
CORPORATE SOURCE: Anti-Inflammatory Res. Unit, Strangeways Res. Lab., Cambridge, CB1 4RN, UK  
SOURCE: Journal of Pharmacy and Pharmacology (1989), 41(2), 112-17  
CODEN: JPPMAB; ISSN: 0022-3573  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A range of anti-inflammatory drugs having varying effects on eicosanoid metabolism and other actions was studied for their potential to **inhibit**  $\alpha$ -interleukin I (IL-1)-induced cartilage

proteoglycan resorption in vitro. No effects on resorption were observed with **inhibitors of cyclooxygenase** or **lipoxigenase** or **mixed inhibitors** of both these enzymes, and no influence on IL-1 effects was observed with added eicosanoids. Among the clin. used disease-modifying antiarthritic agents, only auranofin and the immunoregulatory agent tilomisol were effective in **inhibiting** resorption. Some auranofin analogs having Cl or NO<sub>2</sub> leaving groups that **inhibit** DNA polymerase- $\alpha$  were potent **inhibitors** of IL-1 induced resorption.

CC 1-7 (Pharmacology)

IT 9001-84-7, Phospholipase A2 39391-18-9, **Cyclooxygenase**  
80619-02-9, 5-**Lipoxigenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitors**, resorption of proteoglycans of cartilage response to)

IT 50-18-0, Cyclophosphamide 50-44-2, 6-Mercaptopurine 51-17-2,  
1H-Benzimidazole 52-67-5, D-Penicillamine 59-05-2, Methotrexate  
70-49-5, Thiomalic acid 89-57-6, 5-Aminosalicylic acid 144-83-2,  
Sulfapyridine 446-86-6, Azathioprine 599-79-1, Sulfasalazine  
1113-41-3, L-Penicillamine 4517-99-1 12244-57-4, Sodium aurothiomalate  
14769-73-4, Levamisole 15529-90-5 18840-45-4 20902-45-8,  
Penicillamine disulfide 21256-18-8, Oxaprozin 22071-15-4, Ketoprofen  
22494-27-5, Flufenisal 22494-47-9, Clobuzarit 30544-47-9, Etofenamate  
34031-32-8, Auranofin 42924-53-8, Nabumetone 51579-82-9, Amfenac  
57067-46-6 58433-11-7, Tilomisol 58456-91-0, MK-447 59804-37-4,  
Tenoxicam 59865-13-3, **Cyclosporin A** 60940-34-3, Ebselen  
66000-40-6, BW-755c 71474-64-1 72105-94-3 74765-78-9 75060-92-3,  
ONO-3144 77167-93-2 78712-43-3, OKY-046 83533-66-8 99134-29-9  
100944-16-9, Wy 45637 101910-24-1, REV-5901 110033-10-8, Wy 46905  
112230-08-7, Wy 46679 121367-35-9, Wy 46904 121397-54-4, SKF 199336  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(resorption of proteoglycans of cartilage response to)

L200 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:508982 HCAPLUS

DOCUMENT NUMBER: 107:108982

TITLE: Improved rat cardiac allograft survival with  
nonsteroidal pharmacologic agents related  
eicosanoids

AUTHOR(S): Foegh, M. L.; Khirabadi, B. S.; Ramwell,  
CORPORATE SOURCE: Med. Cent., Georgetown Univ., Washington,  
USA

SOURCE: Transplantation Proceedings (1987), 19(1,  
Book 2), 1297-300  
CODEN: TRPPA8; ISSN: 0041-1345

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The **combination** of **cyclosporin A** (CsA, 0.5 mg/kg/day i.m.) or azathioprine (Aza, 5 mg/kg/day i.p.) with (1) prednisolone, prolongs allograft survival; (2) with **cyclooxygenase inhibitors** like indomethacin, does not prolong allograft survival; (3) with thromboxane antagonists and thromboxane synthase **inhibitors**, prolongs allograft survival; (4) with 5-**lipoxigenase inhibitors**, prolongs allograft survival; and (5) with an LTD<sub>4</sub> receptor antagonist it does not prolong allograft survival. Both **combinations** 3 and 4 prolong allograft survival to the same extent as the clin. used **combination** of CsA and Aza with prednisone.

CC 1-7 (Pharmacology)

ST heart allograft **cyclosporine** azathioprine eicosanoid  
 IT Eicosanoids  
 RL: BIOL (Biological study)  
 (heart allograft survival response to azathioprine and  
**cyclosporin A** and)  
 IT Thromboxanes  
 RL: BIOL (Biological study)  
 (receptors for, antagonists of, heart allograft survival response to  
**cyclosporin A** and azathioprine and)  
 IT Transplant and Transplantation, animal  
 (allo-, of heart, azathioprine and **cyclosporin A** and  
 eicosanoid-related agents effect on)  
 IT Heart  
 (allotransplant, survival of, azathioprine and **cyclosporin A**  
 and eicosanoid-related agents effect on)  
 IT 58-32-2, Dipyridamole 35121-78-9 78919-13-8, Iloprost 81443-73-4,  
 AH23848  
 RL: BIOL (Biological study)  
 (heart allograft survival response to **cyclosporin A** and)  
 IT 50-24-8, Prednisolone 77167-93-2 80619-02-9 110120-68-8  
 RL: BIOL (Biological study)  
 (heart allograft survival response to **cyclosporin A** and  
 azathioprine and)  
 IT 446-86-6 59865-13-3, **Cyclosporine A**  
 RL: BIOL (Biological study)  
 (heart allograft survival response to, eicosanoid-related agents in  
 relation to)  
 IT 39391-18-9, **Cyclooxygenase** 61276-89-9, Thromboxane synthase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitor, heart allograft survival response to azathioprine  
 and)  
 IT 62168-75-6  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitor, heart allograft survival response to **cyclosporin**  
**A** and azathioprine and)

=> fil hcaplus

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY TOTAL  
SESSION

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE  
ENTRY TOTAL  
SESSION

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FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

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L201 18 L43 NOT (L100 OR L199)

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SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST

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=> d l201 ibib abs hitind fhitrn hitrn  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L201 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2004:199861 HCAPLUS  
DOCUMENT NUMBER: 140:296705  
TITLE: Licofelone-clinical update on a novel LOX/COX inhibitor for the treatment of osteoarthritis  
AUTHOR(S): Alvaro-Gracia, J. M.  
CORPORATE SOURCE: Servicio de Reumatologia, Hospital de la Princesa, Madrid, Spain  
SOURCE: Rheumatology (Oxford, United Kingdom) (2004), 43(Suppl. 1), i21-i25  
CODEN: RUMAFK; ISSN: 1462-0324  
PUBLISHER: Oxford University Press  
DOCUMENT TYPE: Journal; **General Review**  
LANGUAGE: English  
AB A review. Licofelone, a competitive **inhibitor** of 5-lipoxygenase, cyclooxygenase (COX)-1 and COX-2, is currently in clin. development for the treatment of osteoarthritis (OA). Licofelone decreases the production of proinflammatory leukotrienes and prostaglandins-which are involved in the pathophysiol. of OA and in gastrointestinal (GI) damage induced by NSAIDs- and has the potential to **combine** good analgesic and anti-inflammatory effects with excellent GI tolerability. Initial endoscopy data in healthy volunteers have demonstrated that licofelone is well tolerated and has a GI safety profile similar to placebo and significantly better than naproxen. These tolerability results were confirmed in patients with OA in two sep. randomized studies. Furthermore, a long-term study (52 wk) has shown that

licofelone is at least as effective as naproxen in the treatment of OA. Licoferone also appears to be as effective as the selective COX-2 inhibitor celecoxib in the treatment of the signs and symptoms of OA. Licoferone has a GI safety profile similar to that of celecoxib, but may offer the advantage of fewer incidences or worsening of peripheral edema. Preliminary data have also shown that licoferone coadministration with low-dose aspirin does not lead to increased GI toxicity. The emerging clin. data for licoferone indicate that it is an effective and well-tolerated therapy that could offer safety advantages over current treatment options, and that it could be suitable for the long-term treatment of a broad spectrum of patients with OA.

CC 1-0 (Pharmacology)

IT Analgesics

**Anti-inflammatory agents**

Human

Osteoarthritis

(LOX/COX inhibitor licoferone for treatment of patients with osteoarthritis)

IT **Antiarthritics**

(osteoarthritis; LOX/COX inhibitor licoferone for treatment of patients with osteoarthritis)

IT **80619-02-9, 5-Lipoxygenase** 329900-75-6,

**Cyclooxygenase-2** 329967-85-3, **Cyclooxygenase-1**

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**inhibitor**; LOX/COX **inhibitor** licoferone for treatment of patients with osteoarthritis)

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**inhibitor**; LOX/COX **inhibitor** licoferone for treatment of patients with osteoarthritis)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**inhibitor**; LOX/COX **inhibitor** licoferone for treatment of patients with osteoarthritis)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 1201 ibib abs hitind fhitrstr hitrn 2-

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L201 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:785798 HCAPLUS

DOCUMENT NUMBER: 139:332141

TITLE: Licoferone Merckle

AUTHOR(S): Ding, Changhai; Cicuttini, Flavia

CORPORATE SOURCE: Menzies Centre for Population Health Research, University of Tasmania, Hobart, Tasmania, 7000, Australia

SOURCE: IDrugs (2003), 6(8), 802-808

CODEN: IDRUFN; ISSN: 1369-7056

PUBLISHER: Current Drugs

DOCUMENT TYPE: Journal; **General Review**



LANGUAGE: English

AB A review. EuroAlliance (a consortium of Alfa Wassermann SpA, Lacer SA and Merckle GmbH) is developing licofelone, a **dual cyclooxygenase and 5-lipoxygenase inhibitor** for the potential treatment of inflammatory disorders including osteoarthritis.

CC 1-0 (Pharmacology)

IT Analgesics

Human

**Inflammation**

Osteoarthritis

(licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

IT **Anti-inflammatory agents**

(nonsteroidal; licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

IT **Antiarthritics**

(osteoarthritis; licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

IT **80619-02-9, 5-Lipoxygenase** 329900-75-6, **Cyclooxygenase 2** 329967-85-3, **Cyclooxygenase 1**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitor**; licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitor**; licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitor**; licofelone for treatment of patients with inflammation, pain, and osteoarthritis)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:645217 HCAPLUS

DOCUMENT NUMBER: 139:374015

TITLE: **Dual inhibition of cyclooxygenase-2 (COX-2) and 5-lipoxygenase (5-LOX) as a new strategy to provide safer non-steroidal anti-inflammatory drugs**

AUTHOR(S): Charlier, Caroline; Michaux, Catherine

CORPORATE SOURCE: Lab. de Chimie Moléculaire Structurale, Facultes Universitaires N.-D. de la Paix, Namur, B-5000, Belg.

SOURCE: European Journal of Medicinal Chemistry (2003), 38(7-8), 645-659

CODEN: EJMCA5; ISSN: 0223-5234

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. **Dual COX/5-LOX (cyclooxygenase/5-lipoxygenase) inhibitors** constitute a valuable alternative to classical non-steroidal anti-inflammatory drugs (NSAIDs) and selective COX-2 inhibitors for the treatment of inflammatory diseases. Indeed, these latter present diverse side effects, which are reduced or

absent in dual-acting agents. In this review, COX and 5-LOX pathways are first described to highlight the therapeutic interest of designing such compds. Various structural families of dual inhibitors are illustrated.

CC 1-0 (Pharmacology)

ST review cyclooxygenase 2 lipoxxygenase inhibitor  
antiinflammatory

IT Inflammation

(dual inhibition of cyclooxygenase-2 and  
5-lipoxxygenase as a new strategy to provide safer  
non-steroidal anti-inflammatory drugs)

IT Anti-inflammatory agents

(nonsteroidal; dual inhibition of  
cyclooxygenase-2 and 5-lipoxxygenase as a  
new strategy to provide safer non-steroidal anti-inflammatory drugs)

IT 80619-02-9, 5-Lipoxxygenase 329900-75-6,  
Cyclooxygenase-2

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dual inhibition of cyclooxygenase-2 and  
5-lipoxxygenase as a new strategy to provide safer  
non-steroidal anti-inflammatory drugs)

IT 80619-02-9, 5-Lipoxxygenase

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dual inhibition of cyclooxygenase-2 and  
5-lipoxxygenase as a new strategy to provide safer  
non-steroidal anti-inflammatory drugs)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 80619-02-9, 5-Lipoxxygenase

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(dual inhibition of cyclooxygenase-2 and  
5-lipoxxygenase as a new strategy to provide safer  
non-steroidal anti-inflammatory drugs)

REFERENCE COUNT: 136 THERE ARE 136 CITED REFERENCES AVAILABLE FOR  
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FORMAT

L201 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:500329 HCAPLUS

DOCUMENT NUMBER: 139:373941

TITLE: COX-LOX inhibition: Current evidence for an emerging  
new therapy

AUTHOR(S): Skelly, M. M.; Hawkey, C. J.

CORPORATE SOURCE: Division of Gastroenterology, Queen's Medical Centre,  
University Hospital, Nottingham, UK

SOURCE: International Journal of Clinical Practice (2003),  
57(4), 301-304

CODEN: IJCPF9; ISSN: 1368-5031

PUBLISHER: Medicom International

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Safe and effective drug treatment is an important objective of  
all doctors. In the treatment of arthritis, non-steroidal  
anti-inflammatory drugs offer effective treatment but safety is  
significantly limited, largely due to gastrointestinal toxicity.  
Attention has recently focused on exploiting increased knowledge of metabolism  
of arachidonic acid to allow the development of safer anti-inflammatory  
drugs. Dual inhibitors of cyclo-oxygenase and lipoxxygenase are

planned. These drugs may inhibit formation of both prostaglandins and leukotrienes. This review outlines the salient features of cyclo-oxygenase and lipoxygenase metabolism of arachidonic acid. The role of the eicosanoids in mediating inflammation and gastrointestinal integrity is delineated. Evidence is presented regarding action of licofelone, one COX/LOX inhibitor that is currently in advanced stages of clin. trials. This review examines the hypothesis that licofelone is an effective anti-inflammatory agent that does not cause peptic damage.

CC 1-0 (Pharmacology)  
 ST review **cyclooxygenase** lipoxygenase **dual**  
 inhibitor antiinflammatory  
 IT **Anti-inflammatory agents**  
 Drug targets  
 Human  
 (**cyclooxygenase**-lipoxygenase **dual**  
 inhibition as emerging new therapy for inflammation)  
 IT 156897-06-2, Licofelone  
 RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of  
 action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (**cyclooxygenase**-lipoxygenase **dual**  
 inhibition as emerging new therapy for inflammation)  
 IT 39391-18-9, Cyclo-oxygenase 80619-02-9, 5-  
**Lipoxygenase**  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (**cyclooxygenase**-lipoxygenase **dual**  
 inhibition as emerging new therapy for inflammation)  
 IT 39391-18-9, Cyclo-oxygenase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (**cyclooxygenase**-lipoxygenase **dual**  
 inhibition as emerging new therapy for inflammation)  
 RN 39391-18-9 HCAPLUS  
 CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, Cyclo-oxygenase 80619-02-9, 5-  
**Lipoxygenase**  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (**cyclooxygenase**-lipoxygenase **dual**  
 inhibition as emerging new therapy for inflammation)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:476991 HCAPLUS

DOCUMENT NUMBER: 139:373904

TITLE: Therapeutic role of **dual** inhibitors of 5-LOX  
 and COX, selective and non-selective non-steroidal  
 anti-inflammatory drugs

AUTHOR(S): Martel-Pelletier, J.; Lajeunesse, D.; Reboul, P.;  
 Pelletier, J.-P.

CORPORATE SOURCE: Osteoarthritis Research Unit, Hopital Notre-Dame,  
 Centre hospitalier de l'Universite de Montreal,  
 Montreal, QC, H2L 4M1, Can.

SOURCE: Annals of the Rheumatic Diseases (2003), 62(6),  
 501-509

CODEN: ARDIAO; ISSN: 0003-4967

PUBLISHER: BMJ Publishing Group

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. **Dual** 5-LOX/COX inhibitors are potential new drugs to treat inflammation. They act by blocking the formation of both prostaglandins and leucotrienes but do not affect lipoxin formation. Such **combined** inhibition avoids some of the disadvantages of selective COX-2 inhibitors and spares the gastrointestinal mucosa.

CC 1-0 (Pharmacology)

ST review **cyclooxygenase** lipooxygenase **inhibitor** NSAIDs antiinflammatory

IT Leukotrienes  
Prostaglandins  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (blocking of prostaglandins; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

IT Digestive tract  
(mucosa, spare; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

IT **Anti-inflammatory agents**  
(nonsteroidal; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

IT **Anti-inflammatory agents**  
Human  
(therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

IT **39391-18-9, Cyclooxygenase 80619-02-9, 5-Lipoxygenase 329900-75-6, COX-2**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

IT **39391-18-9, Cyclooxygenase**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

RN 39391-18-9 HCAPLUS

CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **39391-18-9, Cyclooxygenase 80619-02-9, 5-Lipoxygenase**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; therapeutic role of **dual** inhibitors of 5-LOX and COX, selective and non-selective non-steroidal anti-inflammatory drugs)

REFERENCE COUNT: 103 THERE ARE 103 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:415269 HCAPLUS  
 DOCUMENT NUMBER: 139:345131  
 TITLE: Prevention of thrombosis and vascular inflammation: benefits and limitations of selective or **combined** COX-1, COX-2 and 5-LOX inhibitors  
 AUTHOR(S): de Gaetano, Giovanni; Donati, Maria Benedetta; Cerletti, Chiara  
 CORPORATE SOURCE: Center for High Technology Research and Education in

Biomedical Sciences, Catholic University, Campobasso,  
86100, Italy

SOURCE: Trends in Pharmacological Sciences (2003), 24(5),  
245-252  
CODEN: TPHSDY; ISSN: 0165-6147

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. Anti-thrombotic therapy with aspirin, which at low doses acts  
as a selective **inhibitor** of platelet **cyclooxygenase 1**  
(COX-1) activity, is well established. However, a major limitation of  
aspirin treatment is its gastrointestinal toxicity, which is thought to be  
linked to the suppression of COX-1-mediated production of cytoprotective  
prostaglandins. Selective COX-2 inhibitors are effective  
anti-inflammatory agents with lower gastrointestinal toxicity than  
aspirin. These inhibitors might also downregulate vascular and leukocyte  
inflammatory components that play a major part in atherothrombotic  
disease. However, some selective COX-2 inhibitors appear to increase  
cardiovascular risk. Newly developed **dual COX-5-  
lipoxxygenase (5-LOX) inhibitors** share the  
anti-inflammatory effect and gastric safety of COX-2 inhibitors, but also  
inhibit COX-1-mediated platelet function and 5-LOX-mediated synthesis of  
gastrotoxic leukotrienes. **Dual** inhibitors might thus be  
beneficial in the treatment of atherosclerosis, where platelet-leukocyte  
interaction dominates the underlying inflammatory process.

CC 1-0 (Pharmacology)

ST review **cyclooxygenase lipoxxygenase inhibitor**

IT antiinflammatory anticoagulant thrombosis atherosclerosis

IT Platelet (blood)  
(activation; selective or **combined** COX-1, COX-2 and 5-LOX  
inhibitors in prevention of thrombosis and vascular inflammation)

IT Digestive tract, disease  
(gastrointestinal toxicity; selective or **combined** COX-1,  
COX-2 and 5-LOX inhibitors in prevention of thrombosis and vascular  
inflammation)

IT Leukotrienes  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; selective or **combined** COX-1, COX-2 and 5-LOX  
inhibitors in prevention of thrombosis and vascular inflammation)

IT **Anti-inflammatory agents**  
(nonsteroidal; selective or **combined** COX-1, COX-2 and 5-LOX  
inhibitors in prevention of thrombosis and vascular inflammation)

IT Cell activation  
(platelet; selective or **combined** COX-1, COX-2 and 5-LOX  
inhibitors in prevention of thrombosis and vascular inflammation)

IT Cardiovascular system, disease  
(risk of; selective or **combined** COX-1, COX-2 and 5-LOX  
inhibitors in prevention of thrombosis and vascular inflammation)

IT Anticoagulants

IT Atherosclerosis

IT Human

IT Thrombosis  
(selective or **combined** COX-1, COX-2 and 5-LOX inhibitors in  
prevention of thrombosis and vascular inflammation)

IT 80619-02-9, 5-Lipoxxygenase 329900-75-6,  
Cyclooxygenase 2 329967-85-3, Cyclooxygenase 1

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; selective or **combined** COX-1, COX-2 and  
5-LOX inhibitors in prevention of thrombosis and vascular inflammation)

IT 50-78-2, Aspirin

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (selective or **combined** COX-1, COX-2 and 5-LOX inhibitors in prevention of thrombosis and vascular inflammation)

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; selective or **combined** COX-1, COX-2 and 5-LOX inhibitors in prevention of thrombosis and vascular inflammation)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; selective or **combined** COX-1, COX-2 and 5-LOX inhibitors in prevention of thrombosis and vascular inflammation)

REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:627078 HCAPLUS

DOCUMENT NUMBER: 138:180026

TITLE: Strategies to safely interfere with prostanoid activity while avoiding adverse renal effects: could COX-2 and COX-LOX **dual** inhibition be the answer?

AUTHOR(S): Gambaro, Giovanni

CORPORATE SOURCE: Department of Medical and Surgical Sciences, Division of Nephrology, University Hospital, Padua, Italy

SOURCE: Nephrology, Dialysis, Transplantation (2002), 17(7), 1159-1162

CODEN: NDTREA; ISSN: 0931-0509

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. The authors discuss the role of cyclooxygenase-2 (COX-2) in renal pathol., the role of leukotrienes in renal disease, putative risks of selective inhibition of prostanoid synthetic pathways, and COX-lipoxygenase (LOX) **dual** inhibition.

CC 1-0 (Pharmacology)

ST review nonsteroidal antiinflammatory **cyclooxygenase 2** lipoxygenase **inhibitor**

IT **Anti-inflammatory agents**

(nonsteroidal; strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

IT Prostaglandins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (prostanoids; strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

IT Kidney, disease

(strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

IT **80619-02-9, 5-Lipoxygenase** 329900-75-6,

**Cyclooxygenase-2**

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**inhibitors**; strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

IT 80619-02-9, 5-Lipoxygenase

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 80619-02-9, 5-Lipoxygenase

RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors**; strategies to safely interfere with prostanoid activity while avoiding adverse renal effects in relation to **cyclooxygenase-2** and **cyclooxygenase-lipoxygenase inhibition**)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:435244 HCAPLUS

DOCUMENT NUMBER: 137:319850

TITLE: Selective COX-2 inhibitors and **dual** acting anti-inflammatory drugs: Critical remarks

AUTHOR(S): Bertolini, A.; Ottani, A.; Sandrini, M.

CORPORATE SOURCE: Section of Clinical Pharmacology and Toxicology, Department of Medicine, University of Modena and Reggio Emilia, Modena, 41100, Italy

SOURCE: Current Medicinal Chemistry (2002), 9(10), 1033-1043  
CODEN: CMCHE7; ISSN: 0929-8673

PUBLISHER: Bentham Science Publishers

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. Non steroidal anti-inflammatory drugs (NSAIDs) are still the most commonly used remedies for rheumatic diseases. But NSAIDs produce serious adverse effects, the most important being gastric injury up to gastric ulceration and renal damage. Several strategies were adopted to avoid these shortcomings, especially gastrointestinal toxicity. So, non steroidal anti-inflammatory drugs were associated with gastroprotective agents that counteract the damaging effects of prostaglandin synthesis suppression: however, a **combination** therapy introduces problems of pharmacokinetics, toxicity, and patient's compliance. Also incorporation of a NO-generating moiety into the mol. of several NSAIDs was shown to greatly attenuate their ulcerogenic activity: however, several findings suggest a possible involvement of NO in the pathogenesis of arthritis and subsequent tissue destruction. A most promising approach seemed to be the preparation of novel NSAIDs, specific for the inducible isoform of cyclooxygenase (COX-2): they appear to be devoid of gastrointestinal toxicity, in that they spare mucosal prostaglandin synthesis. However, a number of recent studies raised serious questions about the 2 central tenets that support this approach, namely that the prostaglandins that mediate inflammation and pain are produced solely via COX-2 and that the prostaglandins that are important in gastrointestinal and renal function are produced solely via COX-1. So, increasing evidence shows that COX-2 (not only COX-1) also plays a physiol. role in several body functions and that, conversely, COX-1 (not only COX-2) may also be

induced at sites of inflammation. Moreover, COX-2 selective NSAIDs have lost the cardiovascular protective effects of non-selective NSAIDs, effects which are mediated through COX-1 inhibition (in addition, COX-2 has a role in sustaining vascular prostacyclin production). The products generated by the 5-lipoxygenase pathway (leukotrienes) are particularly important in inflammation: indeed, leukotrienes increase microvascular permeability and are potent chemotactic agents; moreover, **inhibition** of 5-lipoxygenase indirectly reduces the expression of TNF- $\alpha$  (a cytokine that plays a key role in inflammation). This explains the efforts to obtain drugs able to **inhibit** both 5-lipoxygenase and cyclooxygenases: the so-called **dual** acting anti-inflammatory drugs. Such compds. retain the activity of classical NSAIDs, while avoiding their main drawbacks, in that curtailed production of gastroprotective prostaglandins is associated with a concurrent curtailed production of the gastro-damaging and bronchoconstrictive leukotrienes. Moreover, thanks to their mechanism of action, **dual** acting anti-inflammatory drugs could not merely alleviate symptoms of rheumatic diseases, but might also satisfy, at least in part, the criteria of curative drugs. Indeed, leukotrienes are pro-inflammatory, increase microvascular permeability, are potent chemotactic agents and attract eosinophils, neutrophils and monocytes into the synovium. Finally, recent data strongly suggest that **dual** inhibitors may have specific protective activity also in neurodegeneration.

CC 1-0 (Pharmacology)

ST review **cyclooxygenase** lipooxygenase **inhibitor** NSAID  
antirheumatic

IT **Anti-inflammatory agents**

(nonsteroidal; selective COX-2 inhibitors and **dual** acting  
anti-inflammatory drugs)

IT **Antirheumatic agents**

(selective COX-2 inhibitors and **dual** acting anti-inflammatory  
drugs)

IT **80619-02-9, 5-Lipoxygenase** 329900-75-6,  
**Cyclooxygenase 2**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitor**; selective COX-2 **inhibitors** and  
**dual** acting anti-inflammatory drugs)

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitor**; selective COX-2 **inhibitors** and  
**dual** acting anti-inflammatory drugs)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**inhibitor**; selective COX-2 **inhibitors** and  
**dual** acting anti-inflammatory drugs)

REFERENCE COUNT: 127 THERE ARE 127 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L201 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:136698 HCAPLUS

DOCUMENT NUMBER: 136:395185

TITLE: Non steroidal anti-inflammatory and anti-allergy  
agents

AUTHOR(S): Kontogiorgis, C. A.; Hadjipavlou-Litina, D. J.

CORPORATE SOURCE: Department of Pharmaceutical Chemistry, School of



Pharmacy, Aristotelian University of Thessaloniki,  
Thessaloniki, 54006, Greece

SOURCE: Current Medicinal Chemistry (2002), 9(1), 89-98  
CODEN: CMCHE7; ISSN: 0929-8673

PUBLISHER: Bentham Science Publishers

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. Non steroidal anti-inflammatory drugs (NSAIDs) are among the most commonly used for inflammation therapy. The major drawback in using the NSAIDs is in their tendency to cause gastrointestinal toxicity. Since the roles of arachidonic acid (A.A) metabolites, as leukotrienes (Lts), prostaglandins (PGs) and thromboxanes (TXA2) as mediators of the inflammatory reaction were clarified, much effort has been made to develop inhibitors of the production of these chemical mediators as anti-inflammatory agents. These mediators also play important roles in some inflammatory or allergic diseases, acting either alone or in **combination** and **inhibitors of 5-lipoxygenase** (5-LOX) and/or cyclooxygenase isoforms 1,2 (COX-1,2) may be useful for the treatment of asthma, psoriasis and rheumatoid arthritis. Leukotrienes, the products of 5-LOX metabolism have been associated with immediate hypersensitivity reactions, anaphylaxis and asthma. In addition, active oxygen species (AOS) including superoxide anion (O<sub>2</sub><sup>-</sup>), hydrogen peroxide, hydroxyl radical and ferric radical, mediate cell damage in a variety of pathophysiol. conditions and are responsible for oxidative injury of enzymes, lipid membranes and DNA in living cells and tissues. Prostaglandins and leukotrienes in the arachidonate pathway linked with lipid peroxidn. may amplify the oxidative damage. Nitric oxide (NO) plays also a role as an effector in inflammation, since PG and NO thought to be important in maintaining mucosal integrity. **Dual** or selective inhibitors, specific receptor antagonists, AOS scavengers, and NO donors have been under development for therapeutic application. Several classes of inhibitors have been identified and at least 12 major chemical series are known to affect PGs production directly. In this review, we account on our research work concerning NSAIDs **combined** with a reference of the recent literature.

CC 1-0 (Pharmacology)

ST review nonsteroidal antiinflammatory **cyclooxygenase inhibitor** allergy

IT **Anti-inflammatory agents**  
(nonsteroidal; non steroidal anti-inflammatory and anti-allergy agents)

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:921233 HCAPLUS

DOCUMENT NUMBER: 137:72356

TITLE: Pros and cons of selective **inhibition of cyclooxygenase-2** versus **dual lipoxygenase/cyclooxygenase inhibition**: Is two better than one?

AUTHOR(S): Parente, Luca

CORPORATE SOURCE: Dep. of Pharmacology Sci., Univ. of Salerno, Fisciano(Salerno), 84084, Italy

SOURCE: Journal of Rheumatology (2001), 28(11), 2375-2382  
CODEN: JRHUA9; ISSN: 0315-162X

PUBLISHER: Journal of Rheumatology Publishing Co. Ltd.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review on the two targets of drug action, cyclooxygenase-2 and

5-lipoxygenase (5-LOX), evaluating both the effects and the clin. implications of the inhibition of the single enzymes vs. the **combined dual** inhibition of the two enzymes. Incidence of unwanted gastrointestinal (GI) effects are reduced with the highly selective COX-2 inhibitors compared to classical nonspecific COX inhibitors. The prostaglandins produced by COX-2 are involved in various physiol. housekeeping functions like adaptive cytoprotection in the GI mucosa, synthesis of antiaggregatory PGI<sub>2</sub> by endothelial cells, formation of vasodilatory PGE<sub>2</sub> in the kidney, and regulation of the reproductive processes. In exptl. settings, **dual** 5-LOX/COX inhibitors are potent antiinflammatory drugs. The pharmacol. profile of **dual** 5-LOX/COX inhibitors is similar to that of antiinflammatory glucocorticoids, which inhibit phospholipase A<sub>2</sub> (PLA<sub>2</sub>), and prevent arachidonic acid metabolism by both COX and 5-LOX. **Dual** inhibitors do not affect intermediate metabolism or endocrine functions, do not lead to severe side effects normally related with the use of glucocorticoids, and show protective effects on GI mucosa.

CC 1-0 (Pharmacology)

ST review **cyclooxygenase** lipooxygenase **dual**  
**inhibitor** gastrointestinal tract

IT Digestive tract  
(mucosa; pros and cons of selective **inhibition** of  
**cyclooxygenase-2** vs. **dual** lipooxygenase/COX  
**inhibition**)

IT **Anti-inflammatory agents**  
(nonsteroidal; pros and cons of selective **inhibition** of  
**cyclooxygenase-2** vs. **dual** lipooxygenase/COX  
**inhibition**)

IT **80619-02-9, 5-Lipoxygenase** 329900-75-6,  
**Cyclooxygenase-2**  
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological  
activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**inhibitors**; pros and cons of selective **inhibition**  
of **cyclooxygenase-2** vs. **dual** lipooxygenase/COX  
**inhibition**)

IT **80619-02-9, 5-Lipoxygenase**  
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological  
activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**inhibitors**; pros and cons of selective **inhibition**  
of **cyclooxygenase-2** vs. **dual** lipooxygenase/COX  
**inhibition**)

RN 80619-02-9 HCAPLUS

CN Oxygenase, arachidonate 5-lip- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **80619-02-9, 5-Lipoxygenase**  
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological  
activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**inhibitors**; pros and cons of selective **inhibition**  
of **cyclooxygenase-2** vs. **dual** lipooxygenase/COX  
**inhibition**)

REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:890258 HCAPLUS

DOCUMENT NUMBER: 137:118810

TITLE: **Dual** acting anti-inflammatory drugs: a  
reappraisal

AUTHOR(S): Bertolini, A.; Ottani, A.; Sandrini, M.

CORPORATE SOURCE: Department of Biomedical Sciences, Section of  
Pharmacology, University of Modena and Reggio Emilia,  
Modena, 41100, Italy  
SOURCE: Pharmacological Research (2001), 44(6), 437-450  
CODEN: PHMREP; ISSN: 1043-6618  
PUBLISHER: Academic Press  
DOCUMENT TYPE: Journal; **General Review**  
LANGUAGE: English

AB A review. Rheumatic diseases are the most prevalent causes of disability in western countries, and non-steroidal anti-inflammatory drugs (NSAIDs) are still the most commonly used remedies. However, NSAIDs cause several serious adverse effects, the most important being from gastric injury to gastric ulceration and renal damage. Attempts to develop non-steroidal anti-inflammatory remedies devoid of these shortcomings-especially gastrointestinal toxicity-have followed several strategies. Non-steroidal anti-inflammatory drugs have, therefore, been associated with gastroprotective agents that counteract the damaging effects of prostaglandin synthesis suppression; however, a **combination** therapy introduces other problems of pharmacokinetics, toxicity, and patient's compliance. More recently, incorporation of a nitric oxide (NO)-generating moiety into the mol. of several NSAIDs was shown to greatly attenuate their ulcerogenic activity; however, several findings suggest a possible involvement of NO in the pathogenesis of arthritis and subsequent tissue destruction. A most promising approach seemed to be the preparation of novel NSAIDs, targeted at the inducible isoform of prostaglandin synthase (COX-2); they appear to be devoid of gastrointestinal toxicity, in that they spare mucosal prostaglandin synthesis. However, a number of recent studies have raised serious questions about the two central tenets that support this approach, namely that the prostaglandins that mediate inflammation and pain are produced solely via COX-2 and that the prostaglandins that are important in gastrointestinal and renal function are produced solely via COX-1. So, a growing body of evidence shows that COX-2 (not only COX-1) also plays a physiol. role in several body functions and that, conversely, COX-1 (not only COX-2) may also be induced at sites of inflammation. More recent and puzzling data shows that COX-2 is induced during the resolution of an inflammatory response, and at this point it produces anti-inflammatory (PGD<sub>2</sub> and PGF<sub>2α</sub>), but not proinflammatory (PGE<sub>2</sub>) prostaglandins; inhibition of COX-2 at this point thus results in persistence of the inflammation. Moreover, COX-2 selective NSAIDs have lost the cardiovascular protective effects of non-selective NSAIDs, effects which are mediated through COX-1 inhibition (in addition, COX-2 has a role in sustaining vascular prostacyclin production). The generation of other very important products of the arachidonic acid cascade (besides **cyclooxygenase**-produced metabolites) is **inhibited** neither by non-selective nor by COX-2 selective NSAIDs. The products generated by the 5-lipoxygenase pathway (leukotrienes) are particularly important in inflammation; indeed, leukotrienes increase microvascular permeability and are potent chemotactic agents. Moreover, **inhibition** of 5-lipoxygenase indirectly reduces the expression of TNF- $\alpha$  (a cytokine that plays a key role in inflammation). These data and considerations explain the efforts to obtain drugs able to **inhibit** both 5-lipoxygenase and **cyclooxygenases**, the so-called **dual** acting anti-inflammatory drugs. Such compds. retain the activity of classical NSAIDs, while avoiding their main drawbacks, in that curtailed production of gastroprotective prostaglandins is associated with a concurrent curtailed production of the gastro-damaging and bronchoconstrictive leukotrienes. Moreover, thanks to their mechanism of action, **dual** acting anti-inflammatory drugs could not merely alleviate symptoms of rheumatic diseases, but might also satisfy, at least in part, the criteria

of a more definitive treatment. Indeed, leukotrienes are pro-inflammatory, increase microvascular permeability, are potent chemotactic agents and attract eosinophils, neutrophils and monocytes into the synovium. (c) 2001 The Italian Pharmacological Society.

CC 1-0 (Pharmacology)

ST review **dual** acting antiinflammatory antirheumatic cyclooxygenase lipooxygenase

IT **Antirheumatic agents**

Osteoarthritis

Rheumatic diseases

(**dual** acting anti-inflammatory drugs)

IT Prostaglandins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**dual** acting anti-inflammatory drugs)

IT **Anti-inflammatory agents**

(nonsteroidal; **dual** acting anti-inflammatory drugs)

IT 10102-43-9, Nitrogen oxide (NO), biological studies 80619-02-9,

5-Lipoxygenase 329900-75-6, COX 2 329967-85-3, COX-1

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(**dual** acting anti-inflammatory drugs)

REFERENCE COUNT: 127 THERE ARE 127 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:866463 HCAPLUS

DOCUMENT NUMBER: 136:193458

TITLE: **Dual inhibitors of**

**cyclooxygenase and 5-**

**lipooxygenase. A new avenue in**

**anti-inflammatory therapy?**

AUTHOR(S): Fiorucci, Stefano; Meli, Rosaria; Bucci, Mariarosaria; Cirino, Giuseppe

CORPORATE SOURCE: Sezione di Gastroenterologia ed Epatologia, Dipartimento di Medicina Clinica e Sperimentale, Universita delgi Studi di Perugia, Perugia, Italy

SOURCE: Biochemical Pharmacology (2001), 62(11), 1433-1438

CODEN: BCPCA6; ISSN: 0006-2952

PUBLISHER: Elsevier Science Inc.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review is given. Nonsteroidal anti-inflammatory drugs (NSAIDs) are a mainstay in the treatment of inflammatory disease and are among the most widely used drugs worldwide. They are anti-inflammatory, antipyretic, and analgesic and are prescribed as 1st choice for the treatment of rheumatic disorders and, in general, inflammation. The main limitation in using NSAIDs consists in their side-effects, including gastrointestinal ulcerogenic activity and bronchospasm. The mechanism of action of these drugs is attributed to the **inhibition of cyclooxygenase** (COX), and, consequently, the conversion of arachidonic acid into prostaglandins. It is hypothesized that the undesirable side-effects of NSAIDs are due to the inhibition of COX-1 (constitutive isoform), whereas the beneficial effects are related to the inhibition of COX-2 (inducible isoform). Arachidonic acid can also be converted to leukotrienes (LTs) by the action of 5-lipoxygenase (5-LOX). LTC4, LTD4, and LTE4 are potent bronchoconstrictors, whereas LTB4 is chemotactic for leukocytes and plays an important role in the development of gastrointestinal ulcers by contributing to the inflammatory process. Thus, developing **dual** inhibitor compds. that will simultaneously inhibit COX and 5-LOX could enhance their individual anti-inflammatory effects and reduce the

undesirable side-effects associated with NSAIDs, especially of the gastrointestinal tract. The most promising COX/5-LOX inhibitor is ML3000 ([2,2-dimethyl-6-(4-chlorophenyl)-7-phenyl-2,3-dihydro-1H-pyrrolizine-5-yl]-acetic acid), now in Phase III clin. trials. This new approach will certainly help to unravel the mechanisms at the root of the undesirable effects of NSAIDs and to develop safer NSAIDs.

CC 1-0 (Pharmacology)

ST review **cyclooxygenase lipooxygenase inhibitor NSAID**

IT **Anti-inflammatory agents**  
(nonsteroidal; **dual inhibitors of cyclooxygenase and 5-lipoxygenase**)

IT 39391-18-9, **Cyclooxygenase 80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**dual inhibitors of cyclooxygenase and 5-lipoxygenase**)

IT 39391-18-9, **Cyclooxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**dual inhibitors of cyclooxygenase and 5-lipoxygenase**)

RN 39391-18-9 HCAPLUS

CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, **Cyclooxygenase 80619-02-9, 5-Lipoxygenase**

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(**dual inhibitors of cyclooxygenase and 5-lipoxygenase**)

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:554481 HCAPLUS

DOCUMENT NUMBER: 135:326833

TITLE: Discovery and development of ML3000

AUTHOR(S): Laufer, Stefan

CORPORATE SOURCE: Institute of Pharmacy, University of Tuebingen, Tuebingen, D-72076, Germany

SOURCE: Inflammopharmacology (2001), 9(1-2), 101-112

CODEN: IAOAES; ISSN: 0925-4692

PUBLISHER: VSP BV

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review, with refs. NSAID management of the inflammatory process has focused on reducing the production of inflammatory prostaglandins by **inhibiting the cyclooxygenase (COX) enzyme**. However, blocking COX also reduces gastroprotective prostaglandins, causing the well-known gastrointestinal side effects. Furthermore, a shunting of arachidonic acid to the 5-lipoxygenase (5-LOX) pathway may also occur, causing an increase in leukotrienes and further GI damage. Several compds., designed to block both COX and 5-LOX, have failed in clin. trials due to liver toxicity, related to their redox potential. ML3000 is a new pyrrolizine compound resulting from a systematic approach to design a non-redox substrate analog of arachidonic acid that inhibited both COX and 5-LOX. Pharmacodynamic studies determined that ML3000 is a **dual inhibitor of COX and 5-LOX**, with analgesic, anti-inflammatory, antipyretic, antiplatelet, and anti-bronchoconstrictive activity, and minimal gastrointestinal side effects. Clin. studies show efficacy in

osteoarthritis and excellent gastrointestinal safety. ML3000 is now in phase III development.

CC 1-0 (Pharmacology)

ST review ML3000 **cyclooxygenase** lipoxxygenase inhibitor  
antiinflammatory

IT Analgesics  
    **Antiarthritics**  
    Antiasthmatics  
    Antipyretics  
    Platelet aggregation inhibitors  
        (**cyclooxygenase** and lipoxxygenase inhibitor ML3000  
        discovery, efficacy and safety in humans)

IT Digestive tract  
    (disease; **cyclooxygenase** and lipoxxygenase inhibitor  
    ML3000 discovery, efficacy and safety in humans)

IT **Anti-inflammatory agents**  
    (nonsteroidal; **cyclooxygenase** and lipoxxygenase  
    inhibitor ML3000 discovery, efficacy and safety in humans)

IT 156897-06-2, ML3000  
    RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or  
    effector, except adverse); BSU (Biological study, unclassified); THU  
    (Therapeutic use); BIOL (Biological study); USES (Uses)  
    (**cyclooxygenase** and lipoxxygenase inhibitor ML3000  
    discovery, efficacy and safety in humans)

IT 39391-18-9, **Cyclooxygenase** 80619-02-9,  
    5-Lipoxxygenase  
    RL: BSU (Biological study, unclassified); BIOL (Biological study)  
    (inhibitors; **cyclooxygenase** and lipoxxygenase  
    inhibitor ML3000 discovery, efficacy and safety in humans)

IT 39391-18-9, **Cyclooxygenase**  
    RL: BSU (Biological study, unclassified); BIOL (Biological study)  
    (inhibitors; **cyclooxygenase** and lipoxxygenase  
    inhibitor ML3000 discovery, efficacy and safety in humans)

RN 39391-18-9 HCAPLUS

CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, **Cyclooxygenase** 80619-02-9,  
    5-Lipoxxygenase  
    RL: BSU (Biological study, unclassified); BIOL (Biological study)  
    (inhibitors; **cyclooxygenase** and lipoxxygenase  
    inhibitor ML3000 discovery, efficacy and safety in humans)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:411272 HCAPLUS

DOCUMENT NUMBER: 136:240847

TITLE: Anti-inflammatory drugs: new multitarget compounds to  
face an old problem. The **dual** inhibition  
concept

AUTHOR(S): Celotti, Fabio; Laufer, Stefan

CORPORATE SOURCE: Institute of Endocrinology, University of Milano,  
Italy

SOURCE: Pharmacological Research (2001), 43(5), 429-436

CODEN: PHMREP; ISSN: 1043-6618

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review. In this short review we have tried to focus on some new

relevant aspects of the pharmacol. control of inflammation. The clin. availability of new drugs able to produce a selective **inhibition** of type 2 **cyclooxygenase** (COX-2), the enzyme thought to be mainly responsible for generating arachidonic-acid-derived inflammatory mediators, has been the origin of much hope. However, expectations of having an effective and completely safe non-steroidal anti-inflammatory drug (NSAID) have been only partially fulfilled. Emerging information has challenged some aspects of the original hypothesis indicating COX-2 as devoid of 'housekeeping' physiol. functions. Moreover, the recently available clin. studies have indicated only a relatively small improvement in the tolerability of the newer 'selective' COX-2 inhibitors over the classical COX-1/COX-2 **mixed** type NSAIDs. The new appreciation of the role of other arachidonic acid derivs., the leukotrienes (LTS), in producing and maintaining inflammation has generated considerable interest in drugs able to block LTS receptors or to produce a selective **inhibition** of 5-lipoxygenase (5-LO), the initial key enzyme of the leukotriene pathway. These drugs are now included among the effective therapies of asthma but appear, in the few clin. studies performed, to be an insufficient single therapeutic approach in other inflammatory diseases. Drugs able to block equally well both COX and 5-LO metabolic pathways (**dual** inhibitors) have been developed and exptl. evaluated in the last few years, but none are available on the market yet. The pharmacol. rationale at the basis of their development is strong, and animal studies are indicative of a wide range of anti-inflammatory activity. What appears most impressive from the available studies on **dual** inhibitors is their almost complete lack of gastric toxicity, the most troublesome side effect of NSAIDs. The mechanism of the gastric-sparing properties of these drugs is not yet completely understood; however, it appears that leukotrienes significantly contribute to gastric epithelial injury particularly when these compds. represent the major arachidonic acid derivs. present in the gastric mucosa after inhibition of prostanoid production (c) 2001 The Italian Pharmacological Society.

CC 1-0 (Pharmacology)

IT **Anti-inflammatory agents**

(nonsteroidal; antiinflammatory drugs and **dual** inhibition concept)

IT 80619-02-9, **5-Lipoxygenase** 329900-75-6, Cox 2  
329967-85-3, COX 1

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antiinflammatory drugs and **dual inhibition** concept)

REFERENCE COUNT: 101 THERE ARE 101 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L201 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:429621 HCAPLUS

DOCUMENT NUMBER: 133:129369

TITLE: Cellular actions of opioids and other analgesics:  
implications for **synergism** in pain relief

AUTHOR(S): Christie, MacDonald J.; Connor, Mark; Vaughan,  
Christopher W.; Ingram, Susan L.; Bagley, Elena E.

CORPORATE SOURCE: The Medical Foundation, The University of Sydney,  
Sydney, 2006, Australia

SOURCE: Clinical and Experimental Pharmacology and Physiology  
(2000), 27(7), 520-523

CODEN: CEXPB9; ISSN: 0305-1870

PUBLISHER: Blackwell Science Asia Pty Ltd.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review with 31 refs. 1.  $\mu$ -Opioid receptor agonists mediate their central analgesic effects by actions on neurons within brain regions such as the mid-brain periaqueductal gray (PAG). Within the PAG,  $\mu$ -opioid receptor-mediated analgesia results from inhibition of GABAergic influences on output projection neurons. The authors have established that  $\mu$ -opioid receptor activation in the PAG causes a presynaptic inhibition of GABA release that is mediated by activation of a voltage-dependent K<sup>+</sup> channel via 12-lipoxygenase (LOX) metabolites of arachidonic acid. 2. At a cellular level,  $\mu$ -opioid agonists have also been shown to open inwardly rectifying K<sup>+</sup> channels, close voltage-gated Ca<sup>2+</sup> channels and presynaptically inhibit glutamatergic synaptic transmission in the PAG. 3. The  $\mu$ -opioid receptor-mediated presynaptic inhibition of GABAergic transmission was abolished by phospholipase A2 inhibitors and non-specific LOX and specific 12-LOX inhibitors. Cyclo-oxygenase (COX) and specific 5-LOX inhibitors did not reduce the inhibitory effects of  $\mu$ -opioid agonists. 4. The opioid actions on GABAergic transmission were mimicked by arachidonic acid and 12-LOX metabolites, but not 5-LOX metabolites. The efficacy of  $\mu$ -opioids was enhanced **synergistically** by treatment of PAG neurons with inhibitors of the other major enzymes responsible for arachidonic acid metabolism, COX and 5-LOX. 5. These results explain a previously described analgesic action of COX inhibitors in the central nervous system that was both independent of prostanoid release and inhibited by opioid receptor antagonists and they also explain the **synergistic** interaction of opioids with COX inhibitors. These findings also suggest new avenues for the development of centrally active analgesic agents involving **combinations** of lowered doses of opioids and specific 5-LOX inhibitors.

CC 1-0 (Pharmacology)

ST review opioid analgesic cellular action **synergism**

IT Neurotransmission

(GABAergic; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT Analgesics

(cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT Opioids

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT **Anti-inflammatory agents**

(nonsteroidal; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT Drug interactions

(**synergistic**; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT 39391-18-9, Cyclooxygenase 80619-02-9, 5-Lipoxygenase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**inhibitors**; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

IT 39391-18-9, Cyclooxygenase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**inhibitors**; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)



RN 39391-18-9 HCAPLUS

CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, **Cyclooxygenase 80619-02-9,**  
**5-Lipoxygenase**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**inhibitors**; cellular actions of opioids and other analgesics and implications for **synergism** in pain relief)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:477374 HCAPLUS

DOCUMENT NUMBER: 131:138672

TITLE: ML-3000 Merckle GmbH

AUTHOR(S): Chin, Beth; Wallace, John

CORPORATE SOURCE: AltaPharm International, Cochrane, AB, T0L 0W0, Can.

SOURCE: Current Opinion in Anti-Inflammatory and Immunomodulatory Investigational Drugs (1999), 1(2), 118-122

CODEN: COAIF; ISSN: 1464-8474

PUBLISHER: Current Drugs Ltd.

DOCUMENT TYPE: Journal; **General Review**

LANGUAGE: English

AB A review with 25 refs. Merckle's ML-3000, is a **dual**

**cyclooxygenase and 5-lipoxygenase**

**inhibitor**. The compound is in phase II clin. trials for the treatment of inflammatory disorders such as rheumatoid arthritis (RA) and associated pain. The drug reduces prostaglandin synthesis without causing mucosal injury, although the mechanism of action is unclear. ML-3000 is one of the category of drugs known as double-acting anti-inflammatory drugs.

CC 1-0 (Pharmacology)

IT **Anti-inflammatory agents**

**Antirheumatic agents**

(antiinflammatory and antirheumatic activity of ML3000 in humans and laboratory animals)

IT 39391-18-9, **Cyclooxygenase 80619-02-9,**  
**5-Lipoxygenase**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

(**inhibitor**; antiinflammatory and antirheumatic activity of ML3000 in humans and laboratory animals in relation to)

IT 39391-18-9, **Cyclooxygenase**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

(**inhibitor**; antiinflammatory and antirheumatic activity of ML3000 in humans and laboratory animals in relation to)

RN 39391-18-9 HCAPLUS

CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, **Cyclooxygenase 80619-02-9,**  
**5-Lipoxygenase**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

(**inhibitor**; antiinflammatory and antirheumatic activity of ML3000 in humans and laboratory animals in relation to)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L201 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1996:711412 HCAPLUS  
DOCUMENT NUMBER: 126:145  
TITLE: **Dual inhibitors of 5-lipoxygenase and cyclooxygenase**  
AUTHOR(S): Connor, David T.; Boschelli, Diane H.  
CORPORATE SOURCE: Department Chemistry, Parke-Davis, Pharmaceutical Research, Ann Arbor, MI, USA  
SOURCE: Studies in Medicinal Chemistry (1996), 2(Biological Inhibitors), 47-86  
CODEN: SMCHFE; ISSN: 1024-8056  
PUBLISHER: Harwood  
DOCUMENT TYPE: Journal; **General Review**  
LANGUAGE: English

AB A review, with 185 refs., on **inhibitors of 5-lipoxygenase and cyclooxygenase** which should down-regulate an inflammatory response. It appears that a **dual inhibitor** can be a superior anti-inflammatory drug.  
CC 1-0 (Pharmacology)  
ST review **cyclooxygenase lipoxygenase inhibitor** antiinflammatory  
IT **Anti-inflammatory agents**  
(**dual inhibitors** of lipoxygenase and **cyclooxygenase** as anti-inflammatory agents)  
IT 39391-18-9, **Cyclooxygenase 80619-02-9, 5-Lipoxygenase**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors; dual inhibitors** of lipoxygenase and **cyclooxygenase** as anti-inflammatory agents)  
IT 39391-18-9, **Cyclooxygenase**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors; dual inhibitors** of lipoxygenase and **cyclooxygenase** as anti-inflammatory agents)  
RN 39391-18-9 HCAPLUS  
CN Synthetase, prostaglandin endoperoxide (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 39391-18-9, **Cyclooxygenase 80619-02-9, 5-Lipoxygenase**  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (**inhibitors; dual inhibitors** of lipoxygenase and **cyclooxygenase** as anti-inflammatory agents)

L201 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1987:526354 HCAPLUS  
DOCUMENT NUMBER: 107:126354  
TITLE: Inflammation and the mechanism of action of anti-inflammatory drugs  
AUTHOR(S): Vane, John; Botting, Regina  
CORPORATE SOURCE: Med. Coll., St. Bartholomew's Hosp., London, EC1M 6BQ, UK  
SOURCE: FASEB Journal (1987), 1(2), 89-96  
CODEN: FAJOEC; ISSN: 0892-6638  
DOCUMENT TYPE: Journal; **General Review**  
LANGUAGE: English

AB A review with 42 refs. including discussion on mediators of inflammation, the mechanism of action of nonsteroidal and steroid anti-inflammatory

drugs, the role of **dual inhibition** of  
**cyclooxygenase** and **5-lipoxygenase**, and  
discussion specific agents.

CC 1-0 (Pharmacology)

Section cross-reference(s): 2, 4

IT **Inflammation inhibitors**

(mechanism of action of)

IT **Inflammation**

(pathophysiol. of, mediators in)

=> FIL STNGUIDE

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=>



=> fil reg

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DICTIONARY FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Experimental and calculated property data are now available. For more  
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to the file summary sheet on the web at:  
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=> fil zreg

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STRUCTURE FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6  
DICTIONARY FILE UPDATES: 28 JUL 2004 HIGHEST RN 718597-29-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/zregistryss.html>

=> fil zcaplus

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FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

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=> fil hcaplus

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FILE COVERS 1907 - 30 Jul 2004 VOL 141 ISS 6  
FILE LAST UPDATED: 29 Jul 2004 (20040729/ED)

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=> fil embase

COST IN U.S. DOLLARS

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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION

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=> FIL STNGUIDE

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FILE CONTAINS CURRENT INFORMATION.  
 LAST RELOADED: Jul 23, 2004 (20040723/UP).

=> d que 1163

```

L1      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  39391-18-9/RN
L2      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  80619-02-9/RN
L101(   1)SEA FILE=HCAPLUS ABB=ON  PLU=ON  US2002-098644/AP,PRN
L102    SEL  PLU=ON  L101 1- RN :      169 TERMS
L103(   169)SEA FILE=REGISTRY ABB=ON  PLU=ON  L102
L104(   4)SEA FILE=REGISTRY ABB=ON  PLU=ON  L103 AND (C16H14N2O3S OR
        C17H14O4S OR C16H9F5N2O3S OR C16H14N2O3S)/MF
L105(   13)SEA FILE=REGISTRY ABB=ON  PLU=ON  L103 AND (C17H14F3N3O3S OR
        C17H12F4N2O4S OR C17H16N2O4S OR C16H11CLF3N3O2S OR C17H12F2O4S
        OR C16H13F2NO4S OR C17H14F3N3O2S OR C16H12F3N3O2S OR C17H14F3N3
        O2S OR C17H12BRFO2S2 OR C13H18N2O5S OR C16H13F3N4O2S OR
        C14H13N3O4S2)/MF
L106(   17)SEA FILE=REGISTRY ABB=ON  PLU=ON  L104 OR L105
L107(   40)SEA FILE=REGISTRY ABB=ON  PLU=ON  (123653-11-2/CRN OR 162011-90
        -7/CRN OR 169590-41-4/CRN OR 170569-86-5/CRN OR 177660-77-4/CRN
        OR 177660-80-9/CRN OR 177660-92-3/CRN OR 181695-72-7/CRN OR
        185344-51-8/CRN OR 185344-55-2/CRN OR 195061-34-8/CRN OR
        195065-56-6/CRN OR 195065-57-7/CRN OR 71125-38-7/CRN OR
        80937-31-1/CRN OR 88149-94-4/CRN OR 93014-16-5/CRN)
L108    57 SEA FILE=REGISTRY ABB=ON  PLU=ON  L106 OR L107
L109(   1)SEA FILE=HCAPLUS ABB=ON  PLU=ON  US2002-098644/AP,PRN
L110    SEL  PLU=ON  L109 1- RN :      169 TERMS
L111    169 SEA FILE=REGISTRY ABB=ON  PLU=ON  L110
L112(   1)SEA FILE=HCAPLUS ABB=ON  PLU=ON  US2002-098644/AP,PRN
L113    SEL  PLU=ON  L112 1- RN :      169 TERMS
L114(   169)SEA FILE=REGISTRY ABB=ON  PLU=ON  L113
L115(   32)SEA FILE=REGISTRY ABB=ON  PLU=ON  L114 AND MAN/CI
L116(   30)SEA FILE=REGISTRY ABB=ON  PLU=ON  L115 NOT (39391-18-9 OR
        80619-02-9)/RN
L117(   1373)SEA FILE=REGISTRY ABB=ON  PLU=ON  CYCLOSPORIN/BI
L118    1403 SEA FILE=REGISTRY ABB=ON  PLU=ON  L116 OR L117
L120    122 SEA FILE=REGISTRY ABB=ON  PLU=ON  L111 NOT (L108 OR L118)
L121    4649 SEA FILE=EMBASE ABB=ON  PLU=ON  L108
L122    SEL  PLU=ON  L1 1- CHEM :      36 TERMS
L123    24834 SEA FILE=EMBASE ABB=ON  PLU=ON  L122
L124    12782 SEA FILE=EMBASE ABB=ON  PLU=ON  L123 (5A) (?INHIBIT? OR ?RUPT?
        OR ?BLOCK? OR ?DISABL? OR ?STOP?)
L125    12513 SEA FILE=EMBASE ABB=ON  PLU=ON  L120
L126    SEL  PLU=ON  L2 1- CHEM :      10 TERMS
L127    3482 SEA FILE=EMBASE ABB=ON  PLU=ON  L126
L128    1801 SEA FILE=EMBASE ABB=ON  PLU=ON  L127 (5A) (?INHIBIT? OR ?RUPT?
        OR ?BLOCK? OR ?DISABL? OR ?STOP?)
L129    62215 SEA FILE=EMBASE ABB=ON  PLU=ON  ?CYCLOSPORIN?
L130    59942 SEA FILE=EMBASE ABB=ON  PLU=ON  L118
L137    4200 SEA FILE=EMBASE ABB=ON  PLU=ON  ?ARACHIDON? (5A) (?INHIBIT? OR
        ?RUPT? OR ?BLOCK? OR ?DISABL? OR ?STOP?)
L138    14598 SEA FILE=EMBASE ABB=ON  PLU=ON  L124 OR L121
L139    13039 SEA FILE=EMBASE ABB=ON  PLU=ON  L128 OR L125
L140    62410 SEA FILE=EMBASE ABB=ON  PLU=ON  L129 OR L130
  
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L141      37 SEA FILE=EMBASE ABB=ON  PLU=ON  L138 AND L139 AND L140
L142    284643 SEA FILE=EMBASE ABB=ON  PLU=ON  DRUG COMBINATION+PFT,NT/CT
L143      16 SEA FILE=EMBASE ABB=ON  PLU=ON  L141 AND L142
L146    1820982 SEA FILE=EMBASE ABB=ON  PLU=ON  (?INHIBIT? OR ?RUPT? OR
        ?BLOCK? OR ?DISABL? OR ?STOP?)
L147    21871 SEA FILE=EMBASE ABB=ON  PLU=ON  PROSTAGLANDIN SYNTH?
L148    8380 SEA FILE=EMBASE ABB=ON  PLU=ON  L147 (5A) L146
L149    20129 SEA FILE=EMBASE ABB=ON  PLU=ON  CYCLOOXYGENAS?
L150    12425 SEA FILE=EMBASE ABB=ON  PLU=ON  L149 (5A) L146
L151    10946 SEA FILE=EMBASE ABB=ON  PLU=ON  ?LIPOXYGEN?
L152    5146 SEA FILE=EMBASE ABB=ON  PLU=ON  L151 (5A) L146
L153    6182 SEA FILE=EMBASE ABB=ON  PLU=ON  (COX2 OR COX-2)
L154    3833 SEA FILE=EMBASE ABB=ON  PLU=ON  L153 (5A) L146
L155    21155 SEA FILE=EMBASE ABB=ON  PLU=ON  L138 OR L148 OR L150 OR L154
L156    15381 SEA FILE=EMBASE ABB=ON  PLU=ON  L139 OR L152
L157    4997 SEA FILE=EMBASE ABB=ON  PLU=ON  L155 AND L156
L158    8569 SEA FILE=EMBASE ABB=ON  PLU=ON  L157 OR L137
L159     80 SEA FILE=EMBASE ABB=ON  PLU=ON  L158 AND L140
L160     35 SEA FILE=EMBASE ABB=ON  PLU=ON  L159/MAJ
L161    1819760 SEA FILE=EMBASE ABB=ON  PLU=ON  (MIX? OR ?MIXT? OR DUAL OR
        ?COMBIN? OR ?COMPRIS? OR ?COMPOS? OR COMB OR COMPN OR DUAL OR
        ?INTERACT? OR ?SYNERG? OR BLEND)
L162     12 SEA FILE=EMBASE ABB=ON  PLU=ON  L160 AND L161
L163     23 SEA FILE=EMBASE ABB=ON  PLU=ON  L162 OR L143

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=> dup rem l202 l163

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 L203 70 DUP REM L202 L163 (3 DUPLICATES REMOVED)  
 ANSWERS '1-50' FROM FILE HCAPLUS  
 ANSWERS '51-70' FROM FILE EMBASE

=> d ibib hitind abs 51

L203 ANSWER 51 OF 70 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.  
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ACCESSION NUMBER: 2004191466 EMBASE  
 TITLE: Urticaria and angioedema: An overview.  
 AUTHOR: Dibern Jr. D.A.; Dreskin S.C.  
 CORPORATE SOURCE: Dr. S.C. Dreskin, Div. of Allerg. and Clin. Immunology,  
 Univ. of Colorado Hlth. Sci. Center, Campus Box B164, 4200  
 East Ninth Avenue, Denver, CO 80262, United States.  
 stephen.dreskin@uchsc.edu  
 SOURCE: Immunology and Allergy Clinics of North America, (2004)  
 24/2 (141-162).  
 Refs: 157  
 ISSN: 0889-8561 CODEN: INCAEP  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; General Review  
 FILE SEGMENT: 013 Dermatology and Venereology  
 026 Immunology, Serology and Transplantation



030 Pharmacology  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
CT Medical Descriptors:  
\*urticaria: CO, complication  
\*urticaria: DR, drug resistance  
\*urticaria: DT, drug therapy  
\*urticaria: ET, etiology  
\*urticaria: SI, side effect  
\*angioneurotic edema: SI, side effect  
\*chronic urticaria: DR, drug resistance  
\*chronic urticaria: DT, drug therapy  
systemic disease  
physical examination  
medical specialist  
pathogenicity  
side effect: SI, side effect  
anaphylaxis: SI, side effect  
disease exacerbation: SI, side effect  
drug safety  
drug efficacy  
drug megadose  
drug tolerability  
low drug dose  
drug potency  
sedation  
increased appetite: SI, side effect  
weight gain  
human  
clinical trial  
meta analysis  
review  
priority journal  
Drug Descriptors:  
immunosuppressive agent: AE, adverse drug reaction  
adrenalin  
opiate: AE, adverse drug reaction  
opiate: PD, pharmacology  
vancomycin: AE, adverse drug reaction  
vancomycin: PD, pharmacology  
contrast medium: AE, adverse drug reaction  
dipeptidyl carboxypeptidaseinhibitor: AE, adverse drug reaction  
nonsteroid antiinflammatory agent: AE, adverse drug reaction  
acetylsalicylic acid: AE, adverse drug reaction  
**cyclooxygenase 2 inhibitor: AE, adverse drug reaction**  
**cyclooxygenase 2 inhibitor: DT, drug therapy**  
beta adrenergic receptor blocking agent: AE, adverse drug reaction  
antihypertensive agent: AE, adverse drug reaction  
antiglaucoma agent: AE, adverse drug reaction  
hydroxychloroquine  
salazosulfapyridine  
dapsone  
doxepin: AE, adverse drug reaction  
doxepin: CM, drug comparison  
doxepin: DO, drug dose  
doxepin: PD, pharmacology  
zileuton: CM, drug comparison  
leukotriene receptor blocking agent: AE, adverse drug reaction

leukotriene receptor blocking agent: CT, clinical trial  
 leukotriene receptor blocking agent: DO, drug dose  
 leukotriene receptor blocking agent: DT, drug therapy  
 leukotriene receptor blocking agent: PD, pharmacology  
 zafirlukast: CM, drug comparison  
 steroid: AE, adverse drug reaction  
 steroid: DO, drug dose  
 antihistaminic agent: AE, adverse drug reaction  
 antihistaminic agent: CT, clinical trial  
   **antihistaminic agent: CB, drug combination**  
 antihistaminic agent: DO, drug dose  
 antihistaminic agent: DT, drug therapy  
 antihistaminic agent: PD, pharmacology  
   **cyclosporin A: AE, adverse drug reaction**  
   **cyclosporin A: CT, clinical trial**  
   **cyclosporin A: DT, drug therapy**  
   **cyclosporin A: PD, pharmacology**  
 adrenergic receptor stimulating agent  
 calcium channel blocking agent  
 colchicine  
 methotrexate  
 gold: IM, intramuscular drug administration  
 capsaicin  
 warfarin  
 unindexed drug  
 cyproheptadine  
 fexofenadine  
 cimetidine  
 ranitidine

RN (adrenalin) 51-43-4, 55-31-2, 6912-68-1; (opiate) 53663-61-9, 8002-76-4, 8008-60-4; (vancomycin) 1404-90-6, 1404-93-9; (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1; (hydroxychloroquine) 118-42-3, 525-31-5; (salazosulfapyridine) 599-79-1; (dapsone) 80-08-0; (doxepin) 1229-29-4, 1668-19-5; (zileuton) 111406-87-2, 132880-11-6; (zafirlukast) 107753-78-6; (**cyclosporin A**) 59865-13-3, 63798-73-2; (colchicine) 64-86-8; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (gold) 7440-57-5; (capsaicin) 404-86-4; (warfarin) 129-06-6, 2610-86-8, 3324-63-8, 5543-58-8, 81-81-2; (cyproheptadine) 129-03-3, 969-33-5; (fexofenadine) 138452-21-8; (cimetidine) 51481-61-9, 70059-30-2; (ranitidine) 66357-35-5, 66357-59-3

CN ASA; Periactin; Allegra; Tagamet; Zantac; Zylflo

AB Persistent or frequent episodes of urticaria are difficult to evaluate and treat. The best test to identify most patients with a specific underlying cause (eg, physical trigger, allergen, systemic disease) likely is the taking of a careful and detailed history and performance of a physical examination by a specialist who is knowledgeable in urticarial disease. Further study of the pathogenesis and treatment of urticaria is crucial. Given the limited efficacy of presently approved antihistamine treatments and the significant side effects of steroids and **cyclosporine**, there is a pressing need to evaluate other anecdotally supported urticaria treatments in randomized controlled trials.

=> d ibib hitind abs 52-

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ACCESSION NUMBER: 2003165839 EMBASE

TITLE: Current drug therapy for rheumatoid arthritis.  
 AUTHOR: Kawai S.  
 CORPORATE SOURCE: S. Kawai, Institute of Medical Science, St. Marianna Univ.  
 Sch. of Medicine, 2-16-1 Sugao, Miyamae-ku, Kawasaki  
 216-8512, Japan  
 SOURCE: Journal of Orthopaedic Science, (2003) 8/2 (259-263).  
 Refs: 29  
 ISSN: 0949-2658 CODEN: JOSCF5  
 COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Conference Article  
 FILE SEGMENT: 027 Biophysics, Bioengineering and Medical  
 Instrumentation  
 031 Arthritis and Rheumatism  
 037 Drug Literature Index  
 038 Adverse Reactions Titles  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 CT Medical Descriptors:  
 \*rheumatoid arthritis: DT, drug therapy  
 \*rheumatoid arthritis: ET, etiology  
 gastrointestinal symptom: SI, side effect  
 heart infarction: SI, side effect  
 osteoporosis: SI, side effect  
 tuberculosis  
 quality of life  
 edema: SI, side effect  
 hypertension: SI, side effect  
 antiinflammatory activity  
 drug delivery system  
 human  
 nonhuman  
 clinical trial  
 conference paper  
 Drug Descriptors:  
 \*cyclooxygenase 2 inhibitor: AE, adverse drug reaction  
 \*cyclooxygenase 2 inhibitor: DT, drug therapy  
 \*cyclooxygenase 2 inhibitor: PD, pharmacology  
 \*nonsteroid antiinflammatory agent: AE, adverse drug reaction  
 \*nonsteroid antiinflammatory agent: DT, drug therapy  
 \*nonsteroid antiinflammatory agent: PD, pharmacology  
 \*glucocorticoid: AE, adverse drug reaction  
 \*glucocorticoid: CT, clinical trial  
 \*glucocorticoid: CB, drug combination  
 \*glucocorticoid: DO, drug dose  
 \*glucocorticoid: DT, drug therapy  
 \*glucocorticoid: PD, pharmacology  
 \*antirheumatic agent: CB, drug combination  
 \*antirheumatic agent: DT, drug therapy  
 \*antirheumatic agent: PD, pharmacology  
 arachidonic acid: EC, endogenous compound  
 prostaglandin synthase: EC, endogenous compound  
 cyclooxygenase 2: EC, endogenous compound  
 methotrexate: CT, clinical trial  
 methotrexate: CB, drug combination  
 methotrexate: CM, drug comparison  
 methotrexate: DO, drug dose  
 methotrexate: DT, drug therapy  
 salazosulfapyridine: DO, drug dose  
 salazosulfapyridine: DT, drug therapy  
 leflunomide: DT, drug therapy

etanercept: CT, clinical trial  
 etanercept: CM, drug comparison  
 etanercept: DT, drug therapy  
 infliximab: CT, clinical trial  
   **infliximab: CB, drug combination**  
 infliximab: CM, drug comparison  
 infliximab: DT, drug therapy  
 acetylsalicylic acid: DT, drug therapy  
 acetylsalicylic acid: PD, pharmacology  
 celecoxib: DT, drug therapy  
 celecoxib: PD, pharmacology  
 rofecoxib: DT, drug therapy  
 etodolac: DT, drug therapy  
 meloxicam: DT, drug therapy  
 prednisolone: CT, clinical trial  
 prednisolone: DO, drug dose  
 prednisolone: DT, drug therapy  
 etidronic acid: CT, clinical trial  
   **etidronic acid: CB, drug combination**  
 etidronic acid: DT, drug therapy  
 alendronic acid: CT, clinical trial  
   **alendronic acid: CB, drug combination**  
 alendronic acid: DT, drug therapy  
 risedronic acid: CT, clinical trial  
   **risedronic acid: CB, drug combination**  
 risedronic acid: DT, drug therapy  
 azathioprine: DT, drug therapy  
 azathioprine: PD, pharmacology  
 cyclophosphamide: DT, drug therapy  
 cyclophosphamide: PD, pharmacology  
   **cyclosporin: DT, drug therapy**  
 tsukubaenolide: CT, clinical trial  
 tsukubaenolide: DT, drug therapy  
   **recombinant interleukin 1 receptor blocking agent: DT, drug therapy**  
 diclofenac: PD, pharmacology  
 indometacin: PD, pharmacology  
 gold: DT, drug therapy  
 unindexed drug

RN (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (prostaglandin synthase) **39391-18-9**, **59763-19-8**, 9055-65-6; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (salazosulfapyridine) 599-79-1; (leflunomide) 75706-12-6; (etanercept) 185243-69-0, 200013-86-1; (infliximab) 170277-31-3; (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1; (celecoxib) 169590-42-5; (rofecoxib) **162011-90-7**, **186912-82-3**; (etodolac) 41340-25-4; (meloxicam) **71125-38-7**; (prednisolone) 50-24-8; (etidronic acid) 2809-21-4, 3794-83-0, 58449-82-4, 7414-83-7; (alendronic acid) 66376-36-1; (risedronic acid) 105462-24-6, 122458-82-6; (azathioprine) 446-86-6; (cyclophosphamide) 50-18-0; (**cyclosporin**) **79217-60-0**; (tsukubaenolide) 104987-11-3; (diclofenac) 15307-79-6, 15307-86-5; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (gold) 7440-57-5

CN Fk 506

CO Bayer (Germany)

AB The etiology of rheumatoid arthritis (RA) remains unclear at present, but advances have been made in the drug therapy for RA. Recent attention has been focused on selective **cyclooxygenase-2 (COX-2) inhibitors**, nonsteroidal antiinflammatory drugs (NSAIDs) that **inhibit** a subtype of **cyclooxygenase**. Various clinical studies have confirmed that the selective COX-

2 inhibitors cause fewer severe gastrointestinal complications, although an increased incidence of myocardial infarction was suggested. Terminal enzymes of the arachidonic acid cascade, such as membrane-associated prostaglandin E synthase, might be a target for new NSAIDs in the near future. Low-dose glucocorticoid treatment for RA has been reconsidered possibly to prevent articular destruction of RA. Special attention for glucocorticoid-induced osteoporosis by concomitant administration of bisphosphonates might be necessary. Disease-modifying antirheumatic drugs should be effective in delaying the progression of joint destruction and physical disability. Methotrexate, sulfasalazine, and leflunomide have shown such an effect. Inhibition of articular destruction was also proven by administration of the biologic agents etanercept and infliximab plus methotrexate. Tuberculosis complicated with infliximab therapy is one of the most important concerns in Japan. Agents that improve the quality of life of patients with RA are still needed.

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on STN

ACCESSION NUMBER: 2003245898 EMBASE  
TITLE: [Kidney involvement in rheumatoid arthritis].  
COINVOLGIMENTO RENALE IN CORSO DI ARTRITE REUMATOIDE.  
AUTHOR: Icardi A.; Araghi P.; Ciabattini M.; Romano U.; Lazzarini P.; Bianchi G.  
CORPORATE SOURCE: Dr. A. Icardi, Unita Operativa Nefrologia Dialisi, DIMP - Ospedale La Colletta, Via del Giappone 5, 16011 Arenzano (Genova), Italy. andrea.icardi.usl3@libero.it  
SOURCE: Reumatismo, (2003) 55/2 (76-85).  
Refs: 80  
ISSN: 0048-7449 CODEN: REUMEH  
COUNTRY: Italy  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 028 Urology and Nephrology  
031 Arthritis and Rheumatism  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LANGUAGE: Italian  
SUMMARY LANGUAGE: English; Italian

CT Medical Descriptors:  
\*kidney  
\*rheumatoid arthritis: DT, drug therapy  
kidney biopsy  
glomerulonephritis: CO, complication  
glomerulonephritis: DI, diagnosis  
kidney amyloidosis: CO, complication  
kidney amyloidosis: DI, diagnosis  
nephrotoxicity: SI, side effect  
kidney injury: CO, complication  
kidney injury: DI, diagnosis  
kidney disease: CO, complication  
kidney disease: DI, diagnosis  
survival  
morbidity  
kidney failure: CO, complication  
kidney failure: DT, drug therapy  
kidney failure: TH, therapy  
disease association  
minimal change glomerulonephritis: CO, complication  
minimal change glomerulonephritis: DI, diagnosis  
dialysis  
human

review

Drug Descriptors:

antirheumatic agent: AE, adverse drug reaction

**antirheumatic agent: CB, drug combination**

antirheumatic agent: DT, drug therapy

**immunosuppressive agent: CB, drug combination**

immunosuppressive agent: DT, drug therapy

nonsteroid antiinflammatory agent: AE, adverse drug reaction

nonsteroid antiinflammatory agent: DT, drug therapy

gold derivative: AE, adverse drug reaction

gold derivative: DT, drug therapy

penicillamine: AE, adverse drug reaction

penicillamine: DT, drug therapy

**cyclosporin A: AE, adverse drug reaction**

**cyclosporin A: DT, drug therapy**

methotrexate: AE, adverse drug reaction

methotrexate: DT, drug therapy

immunoglobulin A: EC, endogenous compound

leflunomide: AE, adverse drug reaction

leflunomide: DT, drug therapy

etanercept: AE, adverse drug reaction

etanercept: DT, drug therapy

neutrophil cytoplasmic antibody: EC, endogenous compound

amyloid A protein: EC, endogenous compound

interleukin 1: EC, endogenous compound

prostaglandin synthase: EC, endogenous compound

dipeptidyl carboxypeptidase inhibitor

diuretic agent

beta adrenergic receptor blocking agent

vasopressin: EC, endogenous compound

renin: EC, endogenous compound

angiotensin: EC, endogenous compound

aldosterone: EC, endogenous compound

paracetamol

rofecoxib: DT, drug therapy

celecoxib: DT, drug therapy

HLA DR3 antigen: EC, endogenous compound

HLA DQ antigen: EC, endogenous compound

HLA DR5 antigen: EC, endogenous compound

interleukin 2: EC, endogenous compound

cytochrome P450: EC, endogenous compound

unindexed drug

RN (penicillamine) 2219-30-9, 52-67-5; (**cyclosporin A**)

**59865-13-3, 63798-73-2**; (methotrexate) 15475-56-6,

59-05-2, 7413-34-5; (leflunomide) 75706-12-6; (etanercept) 185243-69-0,

200013-86-1; (amyloid A protein) 59165-71-8; (prostaglandin synthase)

**39391-18-9, 59763-19-8, 9055-65-6**; (vasopressin)

11000-17-2; (renin) 61506-93-2, 9015-94-5; (angiotensin) 11128-99-7,

1407-47-2; (aldosterone) 52-39-1, 6251-69-0; (paracetamol) 103-90-2;

(rofecoxib) **162011-90-7, 186912-82-3**; (celecoxib)

169590-42-5; (interleukin 2) 85898-30-2; (cytochrome P450) 9035-51-2

AB Rheumatoid Arthritis (RA) is a widespread disease and its renal involvement, relatively common, is clinically significant because worsens course and mortality of the primary disease. There is still no agreement on the prevalence of renal disorders in RA: data analysis originates from different sources, as death certificates, autopsies, clinical and laboratory findings and kidney biopsies, each with its limitations. Histoimmunological studies on bioptical specimens of patients with RA and kidney damage, led to clarify prevalent pathologies. In order of frequency: glomerulonephritis and amyloidosis (60-65% and 20-30%

respectively), followed by acute or chronic interstitial nephritis. Kidney injury during RA includes secondary renal amyloidosis, nephrotoxic effects of antirheumatic drugs and nephropathies as extra-articular manifestations (rheumatoid nephropathy). Amyloidosis affects survival, increases morbidity and is the main cause of end stage renal disease in patients with RA and nephropathy. Strong association between RA activity and amyloidosis needs the use of immunosuppressive and combined therapies, to prevent this complication and reduce risk of dialysis. Long-lasting and combined RA pharmacotherapy involves various renal side effects. In this review we describe NSAIDs and DMARDs (Disease-Modifying Antirheumatic Drugs) nephrotoxicity, particularly by gold compounds, D-penicillamine, **cyclosporine** A and methotrexate. Rare cases of IgA glomerulonephritis during immunomodulating therapy with leflunomide and TNF blocking receptor (etanercept) are reported; real clinical significance of this drug-related nephropathy will be established by development of RA treatment. In RA nephropathies, mesangial glomerulonephritis is the most frequent histological lesion (35-60 % out of biopsies from patients with urinary abnormalities and/or kidney impairment), followed by minimal change glomerulopathy (3-14%) and p-ANCA positive necrotizing crescentic glomerulonephritis.

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on STN

ACCESSION NUMBER: 2002432577 EMBASE  
TITLE: Do non-steroidal anti-inflammatory drugs and COX-2 selective **inhibitors** have different renal effects?.  
AUTHOR: Galli G.; Panzetta G.  
CORPORATE SOURCE: Dr. G. Galli, U.O. Nefrologia e Dialisi, Via G. Stuparich 1, 34125 Trieste, Italy. giovanni.galli@aots.sanita.fvg.it  
SOURCE: Journal of Nephrology, (2002) 15/5 (480-488).  
Refs: 76  
ISSN: 1121-8428 CODEN: JLNEEL  
COUNTRY: Italy  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 028 Urology and Nephrology  
037 Drug Literature Index  
030 Pharmacology  
038 Adverse Reactions Titles  
018 Cardiovascular Diseases and Cardiovascular Surgery  
031 Arthritis and Rheumatism  
029 Clinical Biochemistry  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
CT Medical Descriptors:  
\*acute kidney failure: SI, side effect  
human  
clinical trial  
nonhuman  
drug effect  
drug mechanism  
enzyme inhibition  
prostaglandin synthesis  
nephrotoxicity: SI, side effect  
kidney circulation  
kidney blood flow  
vasodilatation  
renin release  
sodium urine level  
diuresis

vasoconstriction  
glomerulus filtration  
tissue injury  
kidney perfusion  
disease predisposition  
kidney papilla necrosis: SI, side effect  
interstitial nephritis: SI, side effect  
glomerulonephritis: SI, side effect  
membranous glomerulonephritis: SI, side effect  
focal glomerulosclerosis: SI, side effect  
hyperkalemia: SI, side effect  
hypertension: SI, side effect  
hypertension: DT, drug therapy  
drug safety  
aged  
arthritis: DT, drug therapy  
dyspnea: SI, side effect  
ankle edema: SI, side effect  
ankle edema: DT, drug therapy  
drug withdrawal  
drug efficacy  
Bartter syndrome: DT, drug therapy  
proteinuria: SI, side effect  
eosinophilia: SI, side effect  
eosinophiluria: SI, side effect  
hyponatremia: SI, side effect  
hyponatremia: DT, drug therapy  
drug antagonism  
drug potentiation  
kidney tumor: DT, drug therapy  
protein expression  
kidney fibrosis: SI, side effect  
heart disease: DT, drug therapy  
disease exacerbation: SI, side effect  
kidney dysfunction: SI, side effect  
review  
Drug Descriptors:  
\*nonsteroid antiinflammatory agent: DT, drug therapy  
\*nonsteroid antiinflammatory agent: CM, drug comparison  
\*nonsteroid antiinflammatory agent: PD, pharmacology  
\*nonsteroid antiinflammatory agent: AE, adverse drug reaction  
    \*nonsteroid antiinflammatory agent: CB, drug combination  
    \*nonsteroid antiinflammatory agent: IT, drug interaction  
\*nonsteroid antiinflammatory agent: CT, clinical trial  
    \*cyclooxygenase 2 inhibitor: DT, drug therapy  
    \*cyclooxygenase 2 inhibitor: CM, drug comparison  
    \*cyclooxygenase 2 inhibitor: PD, pharmacology  
    \*cyclooxygenase 2 inhibitor: AE, adverse drug reaction  
    \*cyclooxygenase 2 inhibitor: CT, clinical trial  
    \*cyclooxygenase 2 inhibitor: CB, drug combination  
    \*cyclooxygenase 2 inhibitor: PO, oral drug administration  
prostaglandin synthase: EC, endogenous compound  
prostaglandin: EC, endogenous compound  
renin: EC, endogenous compound  
sodium: EC, endogenous compound  
cyclooxygenase 1: EC, endogenous compound  
cyclooxygenase 2: EC, endogenous compound  
rofecoxib: DT, drug therapy  
rofecoxib: CM, drug comparison  
rofecoxib: PD, pharmacology



rofecoxib: AE, adverse drug reaction  
 rofecoxib: CT, clinical trial  
 celecoxib: DT, drug therapy  
 celecoxib: CM, drug comparison  
 celecoxib: PD, pharmacology  
 celecoxib: AE, adverse drug reaction  
 celecoxib: CT, clinical trial  
     **celecoxib: CB, drug combination**  
 celecoxib: PO, oral drug administration  
 acetylsalicylic acid: DT, drug therapy  
     **acetylsalicylic acid: CB, drug combination**  
 acetylsalicylic acid: AE, adverse drug reaction  
 diuretic agent: DT, drug therapy  
     **diuretic agent: CB, drug combination**  
     **diuretic agent: IT, drug interaction**  
 diuretic agent: PD, pharmacology  
 beta adrenergic receptor blocking agent: DT, drug therapy  
 beta adrenergic receptor blocking agent: PD, pharmacology  
 dipeptidyl carboxypeptidase inhibitor: DT, drug therapy  
     **dipeptidyl carboxypeptidase inhibitor: CB, drug combination**  
     **dipeptidyl carboxypeptidase inhibitor: IT, drug interaction**  
 dipeptidyl carboxypeptidase inhibitor: AE, adverse drug reaction  
 calcium channel blocking agent: DT, drug therapy  
 clonidine: DT, drug therapy  
 vasodilator agent: DT, drug therapy  
 ketorolac: DT, drug therapy  
 ketorolac: PD, pharmacology  
 ketorolac: AE, adverse drug reaction  
 ketorolac: CM, drug comparison  
 ketorolac: CT, clinical trial  
 indometacin: DT, drug therapy  
 indometacin: PD, pharmacology  
 indometacin: CM, drug comparison  
 indometacin: CT, clinical trial  
 indometacin: AE, adverse drug reaction  
 naproxen: DT, drug therapy  
 naproxen: PD, pharmacology  
 naproxen: CM, drug comparison  
 naproxen: CT, clinical trial  
 naproxen: AE, adverse drug reaction  
 nimesulide: DT, drug therapy  
 nimesulide: PD, pharmacology  
 nimesulide: CM, drug comparison  
 nimesulide: CT, clinical trial  
 nimesulide: AE, adverse drug reaction  
     **cyclosporin: DT, drug therapy**  
 creatinine: EC, endogenous compound

RN (prostaglandin synthase) 39391-18-9, 59763-19-8,  
 9055-65-6; (renin) 61506-93-2, 9015-94-5; (sodium) 7440-23-5; (rofecoxib)  
 162011-90-7, 186912-82-3; (celecoxib) 169590-42-5;  
 (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6,  
 63781-77-1; (clonidine) 4205-90-7, 4205-91-8, 57066-25-8; (ketorolac)  
 74103-06-3; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (naproxen)  
 22204-53-1, 26159-34-2; (nimesulide) 51803-78-2; (**cyclosporin**)  
 79217-60-0; (creatinine) 19230-81-0, 60-27-5

AB The main mechanism of action of non-steroidal anti-inflammatory drugs  
 (NSAIDs) is the **inhibition of cyclooxygenase (COX)**,  
 the enzyme involved in prostaglandin synthesis. NSAID nephrotoxicity is  
 linked to this, since prostaglandins act not only in response to  
 inflammatory stimuli, but also as modulators of physiological functions.

When blood volume is compromised, prostaglandins play a role in the renal circulation including vasodilatation, renin secretion, and sodium and water excretion. If vasoconstrictive forces stimulated to maintain the filtration fraction are not balanced by prostaglandin-induced vasodilatation, renal failure may occur. The identification of two isoforms of COX (COX-1 or the "constitutive" isoform and COX-2 or the "inducible" isoform) led to the hypothesis that COX-1-derived prostaglandins were involved in regulating physiological functions, whereas COX-2-derived prostaglandins played a major role in inflammation or tissue damage. It was assumed that the pharmacological effects of NSAIDs depend on the inhibition of COX-2, whereas the toxic organ-specific effects are linked to the inhibition of COX-1. Therefore, rofecoxib and celecoxib, selective inhibitors of COX-2, at least in vitro, were introduced. However, COX-2 plays a physiological role in many tissues and organs, and COX-1 is also involved in inflammatory reactions. In the kidney, "constitutive" expression has been demonstrated for both isoforms. COX-2 inhibitor drugs, such as NSAIDs, reduce sodium excretion, and may cause acute renal failure in patients in whom the maintenance of adequate renal perfusion is "prostaglandin-dependent". Therefore, COX-2 inhibitors, like other NSAIDs, must be used cautiously or not at all in patients with predisposing diseases.

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ACCESSION NUMBER: 2002371418 EMBASE  
TITLE: Proton pump inhibitors: Gastrointestinal indications and beyond.  
AUTHOR: Arvanitakis C.; Blum A.  
CORPORATE SOURCE: Dr. C. Arvanitakis, Fourth Department of Medicine, Hippocraton General Hospital, University of Thessaloniki, Konstantinoupoleos 49, S46 42 Thessaloniki, Greece. carvanit@med.auth.gr  
SOURCE: European Journal of Gastroenterology and Hepatology, (1 Sep 2002) 14/SUPPL. 1 (S3-S4).  
ISSN: 0954-691X CODEN: EJGHES  
COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal; Conference Article  
FILE SEGMENT: 037 Drug Literature Index  
038 Adverse Reactions Titles  
048 Gastroenterology  
LANGUAGE: English  
CT Medical Descriptors:  
\*gastroesophageal reflux: DT, drug therapy  
\*gastroesophageal reflux: PC, prevention  
\*gastroduodenal ulcer: DT, drug therapy  
\*gastroduodenal ulcer: PC, prevention  
Helicobacter pylori  
Helicobacter infection: DT, drug therapy  
eradication therapy  
drug safety  
drug efficacy  
cancer control  
gastrointestinal toxicity: DT, drug therapy  
gastrointestinal toxicity: SI, side effect  
drug indication  
hemodialysis patient  
cancer patient  
kidney graft

human

conference paper

priority journal

Drug Descriptors:

\*proton pump inhibitor: AE, adverse drug reaction

**\*proton pump inhibitor: CB, drug combination**

\*proton pump inhibitor: IT, drug interaction

\*proton pump inhibitor: DT, drug therapy

rabeprazole: AE, adverse drug reaction

rabeprazole: DT, drug therapy

esomeprazole: AE, adverse drug reaction

esomeprazole: DT, drug therapy

**antibiotic agent: CB, drug combination**

antibiotic agent: DT, drug therapy

immunosuppressive agent: IT, drug interaction

**cyclosporin: IT, drug interaction**

tsukubaenolide: IT, drug interaction

nonsteroid antiinflammatory agent: AE, adverse drug reaction

prostaglandin synthase: EC, endogenous compound

cyclooxygenase 1: EC, endogenous compound

cyclooxygenase 2: EC, endogenous compound

prostaglandin: EC, endogenous compound

**cyclooxygenase 2 inhibitor: AE, adverse drug reaction**

**cyclooxygenase 2 inhibitor: DT, drug therapy**

RN (rabeprazole) 117976-89-3, 117976-90-6; (esomeprazole) 119141-88-7,

202742-32-3, 217087-09-7, 217087-10-0; (**cyclosporin**)

79217-60-0; (tsukubaenolide) 104987-11-3; (prostaglandin synthase)

39391-18-9, 59763-19-8, 9055-65-6

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ACCESSION NUMBER: 2001217102 EMBASE

TITLE: Rheumatoid arthritis: Guidelines for emerging therapies.

AUTHOR: Blumberg S.N.; Fox D.A.

CORPORATE SOURCE: Dr. S.N. Blumberg, Gralyn Health Associates Inc., PO Box  
2634, Farmington Hills, MI 48333, United States.  
snblumberg@msn.com

SOURCE: American Journal of Managed Care, (2001) 7/6 (617-626).  
Refs: 47

ISSN: 1088-0224 CODEN: AJMCFY

COUNTRY: United States

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 031 Arthritis and Rheumatism  
037 Drug Literature Index  
017 Public Health, Social Medicine and Epidemiology  
036 Health Policy, Economics and Management  
022 Human Genetics  
038 Adverse Reactions Titles  
026 Immunology, Serology and Transplantation  
029 Clinical Biochemistry  
030 Pharmacology  
005 General Pathology and Pathological Anatomy

LANGUAGE: English

SUMMARY LANGUAGE: English

CT Medical Descriptors:

\*rheumatoid arthritis: EP, epidemiology

\*rheumatoid arthritis: ET, etiology

\*rheumatoid arthritis: DT, drug therapy

\*rheumatoid arthritis: DM, disease management

\*practice guideline

human  
meta analysis  
clinical trial  
drug use  
joint destruction  
disability  
managed care organization  
economic evaluation  
model  
prevalence  
incidence  
pathogenesis  
genetic analysis  
disease severity  
health care cost  
disease classification  
symptomatology  
disease course  
prognosis  
disease activity  
prescription  
drug efficacy  
gastrointestinal symptom: SI, side effect  
protein synthesis inhibition  
metabolic disorder: SI, side effect  
retina disease: SI, side effect  
monotherapy  
leukopenia: SI, side effect  
autoimmune disease: SI, side effect  
kidney disease: SI, side effect  
hypertension: SI, side effect  
immune response  
hypersensitivity reaction: SI, side effect  
injection site  
dose response  
physician attitude  
clinical practice  
drug cost  
treatment outcome  
review  
priority journal  
Drug Descriptors:  
\*antirheumatic agent: DT, drug therapy  
\*antirheumatic agent: PE, pharmacoeconomics  
\*antirheumatic agent: PD, pharmacology  
\*antirheumatic agent: AE, adverse drug reaction  
\*antirheumatic agent: DO, drug dose  
\*antirheumatic agent: AR, intraarticular drug administration  
\*antirheumatic agent: AD, drug administration  
\*antirheumatic agent: CB, drug combination  
\*antirheumatic agent: CT, clinical trial  
\*antirheumatic agent: CM, drug comparison  
\*antirheumatic agent: PO, oral drug administration  
antiinflammatory agent: DT, drug therapy  
antiinflammatory agent: PE, pharmacoeconomics  
antiinflammatory agent: PD, pharmacology  
antiinflammatory agent: AE, adverse drug reaction  
antiinflammatory agent: DO, drug dose  
antiinflammatory agent: AR, intraarticular drug administration  
antiinflammatory agent: AD, drug administration

antiinflammatory agent: CT, clinical trial  
tumor necrosis factor antibody: DT, drug therapy  
tumor necrosis factor antibody: PD, pharmacology  
tumor necrosis factor antibody: CT, clinical trial  
**tumor necrosis factor antibody: CB, drug combination**  
tumor necrosis factor antibody: AE, adverse drug reaction  
tumor necrosis factor antibody: PE, pharmacoeconomics  
nonsteroid antiinflammatory agent: DT, drug therapy  
nonsteroid antiinflammatory agent: PE, pharmacoeconomics  
nonsteroid antiinflammatory agent: PD, pharmacology  
nonsteroid antiinflammatory agent: AE, adverse drug reaction  
nonsteroid antiinflammatory agent: DO, drug dose  
nonsteroid antiinflammatory agent: AR, intraarticular drug administration  
nonsteroid antiinflammatory agent: AD, drug administration  
nonsteroid antiinflammatory agent: CT, clinical trial  
rheumatoid factor: EC, endogenous compound  
prostaglandin synthase: EC, endogenous compound  
celecoxib: DT, drug therapy  
celecoxib: PD, pharmacology  
celecoxib: AE, adverse drug reaction  
celecoxib: CT, clinical trial  
rofecoxib: DT, drug therapy  
rofecoxib: PD, pharmacology  
rofecoxib: AE, adverse drug reaction  
rofecoxib: CT, clinical trial  
corticosteroid: DT, drug therapy  
corticosteroid: DO, drug dose  
corticosteroid: AE, adverse drug reaction  
corticosteroid: AR, intraarticular drug administration  
corticosteroid: AD, drug administration  
corticosteroid: PD, pharmacology  
corticosteroid: CT, clinical trial  
prednisone: DT, drug therapy  
methylprednisolone: DT, drug therapy  
glucocorticoid: DT, drug therapy  
glucocorticoid: PD, pharmacology  
glucocorticoid: AE, adverse drug reaction  
glucocorticoid: CT, clinical trial  
hydroxychloroquine sulfate: DT, drug therapy  
hydroxychloroquine sulfate: PD, pharmacology  
**hydroxychloroquine sulfate: CB, drug combination**  
hydroxychloroquine sulfate: AE, adverse drug reaction  
hydroxychloroquine sulfate: CT, clinical trial  
hydroxychloroquine sulfate: CM, drug comparison  
hydroxychloroquine sulfate: PE, pharmacoeconomics  
salazosulfapyridine: DT, drug therapy  
salazosulfapyridine: PD, pharmacology  
salazosulfapyridine: AE, adverse drug reaction  
salazosulfapyridine: CT, clinical trial  
**salazosulfapyridine: CB, drug combination**  
salazosulfapyridine: CM, drug comparison  
salazosulfapyridine: PE, pharmacoeconomics  
methotrexate: DT, drug therapy  
methotrexate: PD, pharmacology  
methotrexate: CT, clinical trial  
methotrexate: CM, drug comparison  
methotrexate: AE, adverse drug reaction  
**methotrexate: CB, drug combination**  
methotrexate: PE, pharmacoeconomics  
leflunomide: DT, drug therapy

leflunomide: PD, pharmacology  
**leflunomide: CB, drug combination**  
 leflunomide: AE, adverse drug reaction  
 leflunomide: PE, pharmacoeconomics  
 penicillamine: DT, drug therapy  
 penicillamine: PD, pharmacology  
 penicillamine: AE, adverse drug reaction  
**cyclosporin A: DT, drug therapy**  
**cyclosporin A: PD, pharmacology**  
**cyclosporin A: CB, drug combination**  
**cyclosporin A: AE, adverse drug reaction**  
**cyclosporin A: CT, clinical trial**  
 gold salt: DT, drug therapy  
 gold salt: AE, adverse drug reaction  
 gold salt: PE, pharmacoeconomics  
 auranofin: DT, drug therapy  
 auranofin: PO, oral drug administration  
 auranofin: PD, pharmacology  
 cytokine: EC, endogenous compound  
 tumor necrosis factor: EC, endogenous compound  
 infliximab: DT, drug therapy  
 infliximab: PD, pharmacology  
 infliximab: CT, clinical trial  
**infliximab: CB, drug combination**  
 infliximab: AE, adverse drug reaction  
 infliximab: PE, pharmacoeconomics  
 etanercept: DT, drug therapy  
 etanercept: PD, pharmacology  
 etanercept: CT, clinical trial  
**etanercept: CB, drug combination**  
 etanercept: AE, adverse drug reaction  
 placebo  
 aurothioglucose: DT, drug therapy  
 aurothioglucose: AE, adverse drug reaction  
 aurothioglucose: PE, pharmacoeconomics  
 tumor necrosis factor receptor: EC, endogenous compound  
 interleukin 10: EC, endogenous compound  
 interleukin 1: EC, endogenous compound  
 unindexed drug  
 hydroxychloroquine

RN (tumor necrosis factor antibody) 162774-06-3; (rheumatoid factor)  
 9009-79-4; (prostaglandin synthase) **39391-18-9**,  
**59763-19-8**, 9055-65-6; (celecoxib) 169590-42-5; (rofecoxib)  
**162011-90-7**, **186912-82-3**; (prednisone) 53-03-2;  
 (methylprednisolone) 6923-42-8, 83-43-2; (hydroxychloroquine sulfate)  
 747-36-4; (salazosulfapyridine) 599-79-1; (methotrexate) 15475-56-6,  
 59-05-2, 7413-34-5; (leflunomide) 75706-12-6; (penicillamine) 2219-30-9,  
 52-67-5; (**cyclosporin A**) **59865-13-3**,  
**63798-73-2**; (auranofin) 34031-32-8; (infliximab) 170277-31-3;  
 (etanercept) 185243-69-0, 200013-86-1; (aurothioglucose) 12192-57-3;  
 (hydroxychloroquine) 118-42-3, 525-31-5

CN Neoral; Solganal; Azulfidine; Rheumatrex; Plaquenil; Arava; Remicade  
 AB The individual and societal impacts of rheumatoid arthritis are of  
 substantial consequence. Management of the disease has pharmacologically  
 focused on the use of anti-inflammatories and disease-modifying  
 antirheumatic drugs, which are only partially successful in retarding  
 joint destruction and functional disability. The recent emergence of  
 cytokine antagonists (anti-tumor necrosis factor therapy) challenges  
 clinicians and managed care organizations with the need to develop new  
 treatment guidelines. Recent developments in the understanding of

rheumatoid arthritis, including its epidemiological characteristics, economic costs, clinical progression, and current and emerging therapies, are reviewed. Pharmacologic utilization models are proposed. Pending the development of broad-based consensus treatment recommendations, interim treatment guidelines are suggested.

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ACCESSION NUMBER: 2001087284 EMBASE

TITLE: New agents for the medical treatment of interstitial  
cystitis.

AUTHOR: Theoharides T.C.; Sant G.R.

CORPORATE SOURCE: T.C. Theoharides, Dept. of Pharmacology/Exp. Therap.,  
Internal Medicine, Tufts University School of Medicine, 136  
Harrison Avenue, Boston, MA 02111, United States.  
theoharis.theoharides@tufts.edu

SOURCE: Expert Opinion on Investigational Drugs, (2001) 10/3  
(521-546).

Refs: 234

ISSN: 1354-3784 CODEN: EOIDER

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; General Review

FILE SEGMENT: 008 Neurology and Neurosurgery  
028 Urology and Nephrology  
030 Pharmacology  
037 Drug Literature Index  
038 Adverse Reactions Titles

LANGUAGE: English

SUMMARY LANGUAGE: English

CT Medical Descriptors:

- \*interstitial cystitis: DI, diagnosis
- \*interstitial cystitis: DT, drug therapy
- bladder disease: DI, diagnosis
- bladder disease: DT, drug therapy
- clinical feature
- chronic disease: DI, diagnosis
- chronic disease: DT, drug therapy
- prostatitis: DI, diagnosis
- prostatitis: DT, drug therapy
- prevalence
- disease severity
- symptomatology
- bladder biopsy
- disease exacerbation
- mast cell
- neurogenic inflammation: DI, diagnosis
- neurogenic inflammation: DT, drug therapy
- neuropathy
- neurolysis
- sensory nerve
- sensory stimulation
- cell protection
- antiinflammatory activity
- side effect: SI, side effect
- human
- nonhuman
- male
- female
- mouse
- major clinical study

controlled study  
animal tissue  
adolescent  
child  
adult  
review

## Drug Descriptors:

\*glycosaminoglycan: EC, endogenous compound  
\*dimethyl sulfoxide: AE, adverse drug reaction  
\*dimethyl sulfoxide: DT, drug therapy  
\*dimethyl sulfoxide: PD, pharmacology  
\*dimethyl sulfoxide: VE, intravesical drug administration  
\*pentosan polysulfate: AE, adverse drug reaction  
\*pentosan polysulfate: DT, drug therapy  
\*pentosan polysulfate: PD, pharmacology  
\*pentosan polysulfate: PO, oral drug administration  
gabapentin: AE, adverse drug reaction  
gabapentin: DT, drug therapy  
gabapentin: PD, pharmacology  
mexiletine: AE, adverse drug reaction  
mexiletine: DT, drug therapy  
mexiletine: PD, pharmacology  
pentazocine: AE, adverse drug reaction  
pentazocine: DT, drug therapy  
pentazocine: PD, pharmacology  
prochlorperazine: AE, adverse drug reaction  
prochlorperazine: DT, drug therapy  
prochlorperazine: PD, pharmacology  
propiram fumarate: AE, adverse drug reaction  
propiram fumarate: DT, drug therapy  
propiram fumarate: PD, pharmacology  
propiram fumarate: PO, oral drug administration  
tramadol: AE, adverse drug reaction  
tramadol: DT, drug therapy  
tramadol: PD, pharmacology  
amitriptyline: AE, adverse drug reaction  
amitriptyline: DT, drug therapy  
amitriptyline: PD, pharmacology  
desipramine: AE, adverse drug reaction  
desipramine: DT, drug therapy  
desipramine: PD, pharmacology  
doxepin: AE, adverse drug reaction  
doxepin: DT, drug therapy  
doxepin: PD, pharmacology  
imipramine: AE, adverse drug reaction  
imipramine: DT, drug therapy  
imipramine: PD, pharmacology  
leuprorelin: AE, adverse drug reaction  
leuprorelin: DT, drug therapy  
leuprorelin: PD, pharmacology  
tamoxifen: AE, adverse drug reaction  
tamoxifen: DT, drug therapy  
tamoxifen: PD, pharmacology  
celecoxib: AE, adverse drug reaction  
celecoxib: DT, drug therapy  
celecoxib: PD, pharmacology  
choline magnesium trisalicylate: AE, adverse drug reaction  
choline magnesium trisalicylate: DT, drug therapy  
choline magnesium trisalicylate: PD, pharmacology  
chondroitin sulfate: AE, adverse drug reaction



**chondroitin sulfate: CB, drug combination**

chondroitin sulfate: DT, drug therapy

chondroitin sulfate: PD, pharmacology

quercetin: AE, adverse drug reaction

**quercetin: CB, drug combination**

quercetin: DT, drug therapy

quercetin: PD, pharmacology

dipyrrone: AE, adverse drug reaction

dipyrrone: DT, drug therapy

dipyrrone: PD, pharmacology

rofecoxib: AE, adverse drug reaction

rofecoxib: DT, drug therapy

rofecoxib: PD, pharmacology

leukotriene receptor blocking agent: AE, adverse drug reaction

leukotriene receptor blocking agent: DT, drug therapy

leukotriene receptor blocking agent: PD, pharmacology

**cyclosporin: AE, adverse drug reaction****cyclosporin: DT, drug therapy****cyclosporin: PD, pharmacology**

etanercept: AE, adverse drug reaction

etanercept: DT, drug therapy

etanercept: PD, pharmacology

infliximab: AE, adverse drug reaction

infliximab: DT, drug therapy

infliximab: PD, pharmacology

methotrexate: AE, adverse drug reaction

methotrexate: DT, drug therapy

methotrexate: PD, pharmacology

cromoglycate disodium: AE, adverse drug reaction

cromoglycate disodium: DT, drug therapy

cromoglycate disodium: PD, pharmacology

hydroxyzine: AE, adverse drug reaction

hydroxyzine: DT, drug therapy

hydroxyzine: PD, pharmacology

suplatast tosylate: AE, adverse drug reaction

suplatast tosylate: DT, drug therapy

suplatast tosylate: PD, pharmacology

unindexed drug

mexitie

prochlorperazine maleate

sinepuan

tamoxifen citrate

algonot plus

montelukast

zafirlukast

zileuton

**cyclosporin A**

embrel

hydroxyzine embonate

RN (dimethyl sulfoxide) 67-68-5; (pentosan polysulfate) 116001-96-8,  
 37300-21-3, 37319-17-8; (gabapentin) 60142-96-3; (mexiletine) 31828-71-4,  
 5370-01-4; (pentazocine) 359-83-1, 64024-15-3; (prochlorperazine) 58-38-8;  
 (propiram fumarate) 13717-04-9; (tramadol) 27203-92-5, 36282-47-0;  
 (amitriptyline) 50-48-6, 549-18-8; (desipramine) 50-47-5, 58-28-6;  
 (doxepin) 1229-29-4, 1668-19-5; (imipramine) 113-52-0, 50-49-7;  
 (leuprorelin) 53714-56-0, 74381-53-6; (tamoxifen) 10540-29-1; (celecoxib)  
 169590-42-5; (choline magnesium trisalicylate) 64425-90-7; (chondroitin  
 sulfate) 9007-28-7, 9082-07-9; (quercetin) 117-39-5; (dipyrrone)  
 50567-35-6, 5907-38-0, 68-89-3; (rofecoxib) 162011-90-7,  
 186912-82-3; (cyclosporin) 79217-60-0;

(etanercept) 185243-69-0, 200013-86-1; (infliximab) 170277-31-3; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (cromoglycate disodium) 15826-37-6, 16110-51-3, 93356-79-7, 93356-84-4; (hydroxyzine) 2192-20-3, 64095-02-9, 68-88-2; (suplatast tosylate) 94055-76-2; (prochlorperazine maleate) 84-02-6; (tamoxifen citrate) 54965-24-1; (montelukast) 151767-02-1, 158966-92-8; (zafirlukast) 107753-78-6; (zileuton) 111406-87-2, 132880-11-6; (**cyclosporin A**) 59865-13-3, 63798-73-2; (hydroxyzine embonate) 10246-75-0

- CN Neurontin; Mexitie; Talwin; Compazine; Dirame; Ultram; Elavil; Norpramin; Sinepuan; Tofranil; Lupron; Nolvadex; Celebrex; Trilisate; Algonot plus; Novalgin; Vioxx; Singulair; Accolate; Zyflo; Neoral; Embrel; Remicade; Gastrocrom; Atarax; Vistaril; Ipd 1151t
- AB Interstitial cystitis (IC) is a painful, sterile, disorder of the urinary bladder characterised by urgency, frequency, nocturia and pain. IC occurs primarily in women but also in men with recent findings indicating that chronic, abacterial prostatitis may be a variant of this condition. The prevalence of IC has ranged from about 8-60 cases/100,000 female patients depending on the population evaluated. About 10% of patients have severe symptoms that are associated with Hunner's ulcers on bladder biopsy; the rest could be grouped in those with or without bladder inflammation. Symptoms of IC are exacerbated by stress, certain foods and ovulatory hormones. Many patients also experience allergies, irritable bowel syndrome (IBS) and migraines. There have been various reports indicating dysfunction of the bladder glycosaminoglycan (GAG) protective layer and many publications showing a high number of activated bladder mast cells. Increasing evidence suggests that neurogenic inflammation and/or neuropathic pain is a major component of IC pathophysiology. Approved treatments so far include intravesical administration of dimethylsulphoxide (DMSO) or oral pentosanpolysulphate (PPS). New treatments focus on the combined use of drugs that modulate bladder sensory nerve stimulation (neurolytic agents), inhibit neurogenic activation of mast cells, or provide urothelial cytoprotection, together with new drugs with anti-inflammatory activity.

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ACCESSION NUMBER: 2000354575 EMBASE  
TITLE: Nonsteroidal anti-inflammatory drugs and opioids: Safety and usage concerns in the differential treatment of postoperative orofacial pain.  
AUTHOR: Swift J.Q.  
CORPORATE SOURCE: Dr. J.Q. Swift, 7-174 Moos Tower, 515 Delaware St South East, Minneapolis, MN 55455, United States.  
swift001@tc.umn.edu  
SOURCE: Journal of Oral and Maxillofacial Surgery, (2000) 58/10 SUPPL. 2 (8-11).  
Refs: 10  
ISSN: 0278-2391 CODEN: JOMSDA  
COUNTRY: United States  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 011 Otorhinolaryngology  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LANGUAGE: English  
CT Medical Descriptors:  
\*postoperative pain: CO, complication  
\*postoperative pain: DT, drug therapy  
\*face pain: CO, complication  
\*face pain: DT, drug therapy

drug safety  
 surgical wound  
 gastrointestinal symptom: SI, side effect  
 kidney disease: SI, side effect  
 allergic reaction: SI, side effect  
 prostaglandin synthesis  
 cardiovascular disease: SI, side effect  
 central nervous system disease: SI, side effect  
 liver disease: SI, side effect  
 analgesia  
 drug dependence: SI, side effect  
 respiration depression: SI, side effect  
 urine retention: SI, side effect  
 drug antagonism  
 human  
 review

# Drug Descriptors:

\*nonsteroid antiinflammatory agent: AE, adverse drug reaction  
   **\*nonsteroid antiinflammatory agent: CB, drug combination**  
 \*nonsteroid antiinflammatory agent: IT, drug interaction  
 \*nonsteroid antiinflammatory agent: DT, drug therapy  
 \*nonsteroid antiinflammatory agent: PO, oral drug administration  
 \*opiate agonist: AE, adverse drug reaction  
 \*opiate agonist: AD, drug administration  
   **\*opiate agonist: CB, drug combination**  
 \*opiate agonist: DT, drug therapy  
 \*opiate agonist: IM, intramuscular drug administration  
 \*opiate agonist: NA, intranasal drug administration  
 \*opiate agonist: IV, intravenous drug administration  
 \*opiate agonist: PO, oral drug administration  
 \*opiate agonist: PA, parenteral drug administration  
 \*opiate agonist: DL, intradermal drug administration  
   **\*paracetamol: CB, drug combination**  
 \*paracetamol: DT, drug therapy  
 \*paracetamol: PO, oral drug administration  
 \*antihypertensive agent: IT, drug interaction  
 prostaglandin: EC, endogenous compound  
 prostaglandin synthase: EC, endogenous compound  
   **cyclooxygenase 2 inhibitor: EC, endogenous compound**  
 thromboxane A2: EC, endogenous compound  
 opiate receptor: EC, endogenous compound  
 butorphanol tartrate: DT, drug therapy  
 butorphanol tartrate: NA, intranasal drug administration  
 dipeptidyl carboxypeptidase inhibitor: IT, drug interaction  
 beta adrenergic receptor blocking agent: IT, drug interaction  
 diuretic agent: IT, drug interaction  
 lithium: IT, drug interaction  
 digoxin: IT, drug interaction  
   **cyclosporin: IT, drug interaction**  
 anticoagulant agent: IT, drug interaction  
 alcohol: IT, drug interaction  
 methotrexate: IT, drug interaction  
 oral antidiabetic agent: IT, drug interaction  
 oral antidiabetic agent: PO, oral drug administration  
 anticonvulsive agent: IT, drug interaction  
 carbonate dehydratase inhibitor: IT, drug interaction  
 antidiarrheal agent: IT, drug interaction  
 barbituric acid derivative: IT, drug interaction  
 carbamazepine: IT, drug interaction  
 central depressant agent: IT, drug interaction

warfarin: IT, drug interaction  
 hydroxyzine: IT, drug interaction  
 hypnotic agent: IT, drug interaction  
 unindexed drug

RN acetylsalicylic acid  
 (paracetamol) 103-90-2; (prostaglandin synthase) 39391-18-9,  
 59763-19-8, 9055-65-6; (thromboxane A2) 57576-52-0; (butorphanol  
 tartrate) 58786-99-5; (lithium) 7439-93-2; (digoxin) 20830-75-5,  
 57285-89-9; (cyclosporin) 79217-60-0; (alcohol)  
 64-17-5; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (carbamazepine)  
 298-46-4, 8047-84-5; (warfarin) 129-06-6, 2610-86-8, 3324-63-8, 5543-58-8,  
 81-81-2; (hydroxyzine) 2192-20-3, 64095-02-9, 68-88-2; (acetylsalicylic  
 acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1  
 CN (1) Stadol ns; Aspirin  
 CO (1) Bristol Myers Squibb (United States)

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ACCESSION NUMBER: 2002033436 EMBASE  
 TITLE: Rheumatoid arthritis in the geriatric patient.  
 AUTHOR: Marshall L.L.  
 CORPORATE SOURCE: L.L. Marshall, Mercer Univ. Southern Sch. of Pharm.,  
 Atlanta, GA 30341, United States  
 SOURCE: Journal of Geriatric Drug Therapy, (1999) 12/4 (45-72).  
 Refs: 49  
 ISSN: 8756-4629 CODEN: JGDTEF  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; General Review  
 FILE SEGMENT: 020 Gerontology and Geriatrics  
 031 Arthritis and Rheumatism  
 037 Drug Literature Index  
 038 Adverse Reactions Titles

LANGUAGE: English  
 SUMMARY LANGUAGE: English

CT Medical Descriptors:  
 \*rheumatoid arthritis: DT, drug therapy  
 \*rheumatoid arthritis: TH, therapy  
 geriatric patient  
 autoimmune disease  
 cartilage degeneration  
 bone destruction  
 disease course  
 onset age  
 disease activity  
 daily life activity  
 risk benefit analysis  
 treatment planning  
 drug efficacy  
 exercise  
 diet therapy  
 liver toxicity: SI, side effect  
 gastrointestinal symptom: SI, side effect  
 rash: SI, side effect  
 stomatitis: SI, side effect  
 diarrhea: SI, side effect  
 photosensitivity: SI, side effect  
 Stevens Johnson syndrome: SI, side effect  
 bone marrow suppression: SI, side effect  
 thrombocytopenia: SI, side effect  
 human

clinical trial  
review  
Drug Descriptors:  
\*nonsteroid antiinflammatory agent: AE, adverse drug reaction  
  **\*nonsteroid antiinflammatory agent: CB, drug combination**  
\*nonsteroid antiinflammatory agent: DT, drug therapy  
\*antirheumatic agent: AE, adverse drug reaction  
  **\*antirheumatic agent: CB, drug combination**  
\*antirheumatic agent: DT, drug therapy  
  **\*cyclooxygenase 2 inhibitor: CT, clinical trial**  
  **\*cyclooxygenase 2 inhibitor: DT, drug therapy**  
corticosteroid: AE, adverse drug reaction  
corticosteroid: DT, drug therapy  
corticosteroid: PO, oral drug administration  
methotrexate: AE, adverse drug reaction  
  **methotrexate: CB, drug combination**  
methotrexate: DT, drug therapy  
methotrexate: IM, intramuscular drug administration  
methotrexate: PO, oral drug administration  
methotrexate: SC, subcutaneous drug administration  
salazosulfapyridine: AE, adverse drug reaction  
  **salazosulfapyridine: CB, drug combination**  
salazosulfapyridine: DT, drug therapy  
hydroxychloroquine: AE, adverse drug reaction  
hydroxychloroquine: CT, clinical trial  
  **hydroxychloroquine: CB, drug combination**  
hydroxychloroquine: DT, drug therapy  
  **cyclosporin: AE, adverse drug reaction**  
  **cyclosporin: CB, drug combination**  
  **cyclosporin: DT, drug therapy**  
gold: AE, adverse drug reaction  
gold: CT, clinical trial  
  **gold: CB, drug combination**  
gold: DT, drug therapy  
gold: PO, oral drug administration  
prednisone: AE, adverse drug reaction  
prednisone: DT, drug therapy  
prednisone: PO, oral drug administration  
sulindac: DT, drug therapy  
celecoxib: CT, clinical trial  
celecoxib: DT, drug therapy  
rofecoxib: DT, drug therapy  
tenidap: DT, drug therapy  
azathioprine: AE, adverse drug reaction  
azathioprine: DT, drug therapy  
cyclophosphamide: AE, adverse drug reaction  
cyclophosphamide: DT, drug therapy  
leflunomide: AE, adverse drug reaction  
leflunomide: CT, clinical trial  
leflunomide: DT, drug therapy  
minocycline: AE, adverse drug reaction  
minocycline: DT, drug therapy  
penicillamine: AE, adverse drug reaction  
penicillamine: DT, drug therapy  
etanercept: AE, adverse drug reaction  
etanercept: CT, clinical trial  
etanercept: DT, drug therapy  
etanercept: SC, subcutaneous drug administration  
diclofenac: AE, adverse drug reaction  
diclofenac: DT, drug therapy

etodolac: AE, adverse drug reaction  
 etodolac: DT, drug therapy  
 fenoprofen: AE, adverse drug reaction  
 fenoprofen: DT, drug therapy  
 ibuprofen: AE, adverse drug reaction  
 ibuprofen: DT, drug therapy  
 ketoprofen: AE, adverse drug reaction  
 ketoprofen: DT, drug therapy  
 nabumetone: AE, adverse drug reaction  
 nabumetone: DT, drug therapy  
 unindexed drug

RN (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (salazosulfapyridine) 599-79-1; (hydroxychloroquine) 118-42-3, 525-31-5; (**cyclosporin**) **79217-60-0**; (gold) 7440-57-5; (prednisone) 53-03-2; (sulindac) 38194-50-2; (celecoxib) 169590-42-5; (rofecoxib) **162011-90-7**, **186912-82-3**; (tenidap) 100599-27-7, **120210-48-2**; (azathioprine) 446-86-6; (cyclophosphamide) 50-18-0; (leflunomide) 75706-12-6; (minocycline) 10118-90-8, 11006-27-2, 13614-98-7; (penicillamine) 2219-30-9, 52-67-5; (etanercept) 185243-69-0, 200013-86-1; (diclofenac) 15307-79-6, 15307-86-5; (etodolac) 41340-25-4; (fenoprofen) 29679-58-1, 31879-05-7, 34691-31-1; (ibuprofen) 15687-27-1; (ketoprofen) 22071-15-4, 57495-14-4; (nabumetone) 42924-53-8

AB Rheumatoid arthritis (RA) is a systemic autoimmune disorder. Cartilage and bone destruction occur early in the disease. Although total remission is uncommon, therapy can slow the rate of disease progression. The majority of geriatric patients with RA developed the disease in mid-life, but some patients have elderly onset RA. Patients with elderly onset RA usually have a milder form of the disease than patients who develop RA earlier in life. Goals of therapy include controlling disease activity, slowing joint damage, decreasing pain and inflammation, and maintaining function for activities of daily living. Nonsteroidal anti-inflammatory drugs, corticosteroids, and disease modifying anti-rheumatic drugs (DMARDs) are the pharmacological agents most often used. DMARDs are now used earlier in the disease than in the past to control symptoms and to decrease joint destruction. The risks and benefits of therapy must be considered in developing a treatment plan for a geriatric patient. Geriatric patients are at increased risk for adverse effects from pharmacologic therapy compared to younger patients, and should be closely monitored for efficacy and toxicity.

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ACCESSION NUMBER: 1998235212 EMBASE  
 TITLE: New prospects for the treatment of rheumatoid arthritis.  
 AUTHOR: Choy E.H.S.  
 CORPORATE SOURCE: E.H.S. Choy, Clinical/Academic Rheumatology Unit, King's College Hospital, East Dulwich Grove, London SE22 8PT, United Kingdom. e.choy@umds.ac.uk  
 SOURCE: Expert Opinion on Investigational Drugs, (1998) 7/7 (1087-1097).  
 Refs: 75  
 ISSN: 1354-3784 CODEN: EOIDER  
 COUNTRY: United Kingdom  
 DOCUMENT TYPE: Journal; General Review  
 FILE SEGMENT: 026 Immunology, Serology and Transplantation  
 030 Pharmacology  
 031 Arthritis and Rheumatism  
 037 Drug Literature Index  
 038 Adverse Reactions Titles  
 LANGUAGE: English

## SUMMARY LANGUAGE: English

## CT Medical Descriptors:

\*rheumatoid arthritis: DT, drug therapy  
\*rheumatoid arthritis: EP, epidemiology  
\*rheumatoid arthritis: ET, etiology  
synovitis: CO, complication  
synovitis: DT, drug therapy  
gastrointestinal toxicity: DT, drug therapy  
gastrointestinal toxicity: PC, prevention  
gastrointestinal toxicity: SI, side effect  
immunomodulation  
joint destruction: CO, complication  
joint destruction: DT, drug therapy  
joint destruction: PC, prevention  
mortality  
morbidity  
osteoporosis: SI, side effect  
human  
review

## Drug Descriptors:

\*nonsteroid antiinflammatory agent: AE, adverse drug reaction  
**\*nonsteroid antiinflammatory agent: CB, drug combination**  
\*nonsteroid antiinflammatory agent: CM, drug comparison  
\*nonsteroid antiinflammatory agent: DT, drug therapy  
\*nonsteroid antiinflammatory agent: PD, pharmacology  
\*corticosteroid: AE, adverse drug reaction  
\*corticosteroid: CM, drug comparison  
\*corticosteroid: DT, drug therapy  
\*corticosteroid: PD, pharmacology  
\*monoclonal antibody: AN, drug analysis  
\*monoclonal antibody: CM, drug comparison  
\*monoclonal antibody: DV, drug development  
\*monoclonal antibody: DT, drug therapy  
\*monoclonal antibody: PD, pharmacology  
\*antisense oligodeoxynucleotide: AN, drug analysis  
\*antisense oligodeoxynucleotide: CM, drug comparison  
\*antisense oligodeoxynucleotide: DV, drug development  
\*antisense oligodeoxynucleotide: PD, pharmacology  
\*cytokine: AN, drug analysis  
\*cytokine: CM, drug comparison  
\*cytokine: DV, drug development  
\*cytokine: PD, pharmacology  
prostaglandin synthase: EC, endogenous compound  
**prostaglandin derivative: CB, drug combination**  
prostaglandin derivative: DT, drug therapy  
**proton pump inhibitor: CB, drug combination**  
proton pump inhibitor: DT, drug therapy  
**antihistaminic agent: CB, drug combination**  
antihistaminic agent: DT, drug therapy  
cyclophosphamide: AE, adverse drug reaction  
cyclophosphamide: CM, drug comparison  
cyclophosphamide: DT, drug therapy  
cyclophosphamide: PD, pharmacology  
penicillamine: AE, adverse drug reaction  
**penicillamine: CB, drug combination**  
penicillamine: DT, drug therapy  
penicillamine: PD, pharmacology  
antimalarial agent: AE, adverse drug reaction  
antimalarial agent: CM, drug comparison  
antimalarial agent: DT, drug therapy

antimalarial agent: PD, pharmacology  
gold derivative: AE, adverse drug reaction  
    **gold derivative: CB, drug combination**  
gold derivative: CM, drug comparison  
gold derivative: DT, drug therapy  
gold derivative: PD, pharmacology  
salazosulfapyridine: AE, adverse drug reaction  
    **salazosulfapyridine: CB, drug combination**  
salazosulfapyridine: CM, drug comparison  
salazosulfapyridine: DT, drug therapy  
salazosulfapyridine: PD, pharmacology  
    **cyclosporin: AE, adverse drug reaction**  
    **cyclosporin: CM, drug comparison**  
    **cyclosporin: DT, drug therapy**  
    **cyclosporin: PD, pharmacology**  
methotrexate: AE, adverse drug reaction  
    **methotrexate: CB, drug combination**  
methotrexate: CM, drug comparison  
methotrexate: DT, drug therapy  
methotrexate: PD, pharmacology  
deflazacort: AE, adverse drug reaction  
deflazacort: CM, drug comparison  
deflazacort: DT, drug therapy  
deflazacort: PD, pharmacology  
prednisolone: CM, drug comparison  
prednisolone: DT, drug therapy  
    **hydroxychloroquine: CB, drug combination**  
hydroxychloroquine: DT, drug therapy  
    **azathioprine: CB, drug combination**  
azathioprine: DT, drug therapy  
celebra: AN, drug analysis  
celebra: CM, drug comparison  
celebra: DV, drug development  
celebra: PD, pharmacology  
celecoxib  
    **cyclooxygenase 2 inhibitor: AN, drug analysis**  
    **cyclooxygenase 2 inhibitor: CM, drug comparison**  
    **cyclooxygenase 2 inhibitor: DV, drug development**  
    **cyclooxygenase 2 inhibitor: DT, drug therapy**  
    **cyclooxygenase 2 inhibitor: PD, pharmacology**  
tumor necrosis factor alpha antibody: AN, drug analysis  
tumor necrosis factor alpha antibody: CM, drug comparison  
tumor necrosis factor alpha antibody: DV, drug development  
tumor necrosis factor alpha antibody: PD, pharmacology  
bay 103356  
tumor necrosis factor receptor fc fusion protein: AN, drug analysis  
tumor necrosis factor receptor fc fusion protein: CM, drug comparison  
tumor necrosis factor receptor fc fusion protein: DV, drug development  
tumor necrosis factor receptor fc fusion protein: PD, pharmacology  
tnfr 75 fc  
lenercept: AN, drug analysis  
lenercept: CM, drug comparison  
lenercept: DV, drug development  
lenercept: PD, pharmacology  
recombinant interleukin 1 receptor blocking agent: AN, drug analysis  
recombinant interleukin 1 receptor blocking agent: CM, drug comparison  
recombinant interleukin 1 receptor blocking agent: DV, drug development  
recombinant interleukin 1 receptor blocking agent: PD, pharmacology  
unindexed drug  
unclassified drug



RN (prostaglandin synthase) 39391-18-9, 59763-19-8, 9055-65-6; (cyclophosphamide) 50-18-0; (penicillamine) 2219-30-9, 52-67-5; (salazosulfapyridine) 599-79-1; (cyclosporin) 79217-60-0; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (deflazacort) 14484-47-0; (prednisolone) 50-24-8; (hydroxychloroquine) 118-42-3, 525-31-5; (azathioprine) 446-86-6

AB Rheumatoid arthritis (RA) is a common inflammatory and destructive arthropathy. Current therapies fail to stop joint damage and reduce long-term disability. Greater understanding of disease pathogenesis has identified many inflammatory mediators as possible therapeutic targets. Novel therapeutic agents, such as monoclonal antibodies (mAbs), cytokine receptor-human immunoglobulin constructs, recombinant human proteins and antisense oligodeoxynucleotides targeting these inflammatory mediators have been tested in rheumatoid arthritis with some success. In particular, inflammation can be effectively suppressed using anticytokine therapies. However, the ideal treatment for RA, one that is immunomodulatory and induces prolonged disease remission after a single course of therapy, still eludes us. Strategies aiming to achieve this include TCR peptide vaccination and anti-CD4 mAbs, currently in clinical trials in RA.

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ACCESSION NUMBER: 1998262990 EMBASE  
TITLE: Current use of health status instruments in randomised controlled trials on patients with rheumatoid arthritis.  
AUTHOR: Fransen J.; Stucki G.  
CORPORATE SOURCE: G. Stucki, Rheumaklinik Inst Physikalische Med, Universitatsspital, Gloriastrasse 25, CH-8091 Zurich, Switzerland. ruzstg@ruz.unizh.ch  
SOURCE: Disease Management and Health Outcomes, (1998) 3/6 (271-277).  
Refs: 32  
ISSN: 1173-8790 CODEN: DMHOFV  
COUNTRY: New Zealand  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 031 Arthritis and Rheumatism  
036 Health Policy, Economics and Management  
037 Drug Literature Index  
LANGUAGE: English  
SUMMARY LANGUAGE: English

CT Medical Descriptors:  
\*health status  
\*rheumatoid arthritis: DI, diagnosis  
\*rheumatoid arthritis: DT, drug therapy  
\*rheumatoid arthritis: TH, therapy  
\*outcomes research  
questionnaire  
treatment outcome  
quality of life  
medical assessment  
symptomatology  
patient counseling  
training  
relaxation training  
muscle training  
human  
clinical trial  
randomized controlled trial  
review  
Drug Descriptors:

diphtheria toxin interleukin 2: CT, clinical trial  
 diphtheria toxin interleukin 2: DT, drug therapy  
 tenidap: CT, clinical trial  
 tenidap: DT, drug therapy  
 antirheumatic agent: CT, clinical trial  
 antirheumatic agent: CM, drug comparison  
 antirheumatic agent: DT, drug therapy  
 meloxicam: CT, clinical trial  
 meloxicam: CM, drug comparison  
 meloxicam: DT, drug therapy  
 cd5 antigen: CT, clinical trial  
 cd5 antigen: DT, drug therapy  
 collagen type 2: CT, clinical trial  
 collagen type 2: DT, drug therapy  
   cyclosporin a: CT, clinical trial  
   cyclosporin a: CB, drug combination  
   cyclosporin a: CM, drug comparison  
   cyclosporin a: DT, drug therapy  
 pidotimod: CT, clinical trial  
   pidotimod: CB, drug combination  
 pidotimod: DT, drug therapy  
 penicillamine: CT, clinical trial  
 penicillamine: DT, drug therapy  
 methotrexate: CT, clinical trial  
 methotrexate: CM, drug comparison  
 methotrexate: DT, drug therapy  
 chloroquine: CT, clinical trial  
 chloroquine: CM, drug comparison  
 chloroquine: DT, drug therapy  
 naproxen: CT, clinical trial  
 naproxen: CM, drug comparison  
 naproxen: DT, drug therapy  
 aurothiomalate: CT, clinical trial  
 aurothiomalate: CM, drug comparison  
 aurothiomalate: DT, drug therapy  
 interleukin 1 receptor: CT, clinical trial  
 interleukin 1 receptor: DT, drug therapy

RN (tenidap) 100599-27-7, 120210-48-2; (meloxicam) 71125-38-7; (cyclosporin a) 59865-13-3, 63798-73-2; (pidotimod) 121808-62-6; (penicillamine) 2219-30-9, 52-67-5; (methotrexate) 15475-56-6, 59-05-2, 7413-34-5; (chloroquine) 132-73-0, 3545-67-3, 50-63-5, 54-05-7; (naproxen) 22204-53-1, 26159-34-2; (aurothiomalate) 12244-57-4

AB This review examines the current use of health status instruments, such as questionnaires, in randomised clinical trials in rheumatoid arthritis (RA). A computer-assisted literature search was done using information from January 1996 until May 1997. The articles included were reviewed in a standardised way according to the kind of study-design, type of intervention, treatment arms, study population, follow-up, use of outcome measures, use of the core set and of the response criteria, and the results. 44 trials were identified and, of these, 31 were included. Of the 31 efficacy studies on RA patients, 10 did not use health status instruments. The most frequently used health status instruments were the Arthritis Impact Measurement Scales (AIMS) and the Stanford Health Assessment Questionnaire (HAQ). Of 21 studies, 5 showed a between-group difference with respect to health status. The main finding was that health status instruments are inconsistently used and lack full description and standardisation in their use as end-points in randomised clinical trials in RA.

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ACCESSION NUMBER: 97082040 EMBASE  
DOCUMENT NUMBER: 1997082040  
TITLE: Drug treatment of rheumatic diseases in the 1990s:  
Achievements and future developments.  
AUTHOR: Choy E.H.S.; Scott D.L.  
CORPORATE SOURCE: Dr. D.L. Scott, Clinical and Academic Rheumatology, King's  
College Hospital (Dulwich), East Dulwich Grove, London SE22  
8PT, United Kingdom  
SOURCE: Drugs, (1997) 53/3 (337-348).  
Refs: 91  
ISSN: 0012-6667 CODEN: DRUGAY  
COUNTRY: New Zealand  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 006 Internal Medicine  
030 Pharmacology  
031 Arthritis and Rheumatism  
033 Orthopedic Surgery  
037 Drug Literature Index  
038 Adverse Reactions Titles

LANGUAGE: English

SUMMARY LANGUAGE: English

CT Medical Descriptors:

- \*arthritis: DT, drug therapy
- \*rheumatic disease: DT, drug therapy
- alopecia: SI, side effect
- antiinflammatory activity
- article
- biotechnology
- bone atrophy: SI, side effect
- cellular immunity
- clinical trial
- controlled study
- drug selectivity
- gastrointestinal symptom: SI, side effect
- human
- hypertension: SI, side effect
- immunomodulation
- major clinical study
- meta analysis
- nephrotoxicity: SI, side effect
- osteoporosis: SI, side effect
- rheumatoid arthritis: DT, drug therapy
- synovitis: DT, drug therapy
- t lymphocyte
- vertigo: SI, side effect

Drug Descriptors:

- \*antiinflammatory agent: AE, adverse drug reaction
- \*antiinflammatory agent: CT, clinical trial
- \*antiinflammatory agent: DT, drug therapy
- \*antirheumatic agent: CT, clinical trial
- \*antirheumatic agent: DV, drug development
- \*antirheumatic agent: DT, drug therapy
- antibiotic agent: CT, clinical trial
- antibiotic agent: DT, drug therapy
- cd4 antigen: EC, endogenous compound
- corticosteroid: AE, adverse drug reaction
- corticosteroid: CT, clinical trial
- corticosteroid: AD, drug administration

corticosteroid: DO, drug dose  
 corticosteroid: DT, drug therapy  
     cyclooxygenase 2 inhibitor: PD, pharmacology  
     cyclosporin: CT, clinical trial  
     cyclosporin: AE, adverse drug reaction  
     cyclosporin: PR, pharmaceuticals  
     cyclosporin: DT, drug therapy  
     cyclosporin: CB, drug combination  
     cyclosporin a: AE, adverse drug reaction  
     cyclosporin a: CT, clinical trial  
     cyclosporin a: DT, drug therapy  
     cyclosporin a: PR, pharmaceuticals  
 cytokine: EC, endogenous compound  
 deflazacort: DT, drug therapy  
 deflazacort: CT, clinical trial  
 deflazacort: AE, adverse drug reaction  
 diclofenac: DT, drug therapy  
     diclofenac: CB, drug combination  
 immunoglobulin g: CT, clinical trial  
 immunoglobulin g: DO, drug dose  
 immunoglobulin g: DT, drug therapy  
 immunoglobulin g: PD, pharmacology  
 leflunomide: PD, pharmacology  
 leflunomide: DT, drug therapy  
 leflunomide: CT, clinical trial  
 leflunomide: AE, adverse drug reaction  
 meloxicam: PD, pharmacology  
 meloxicam: DT, drug therapy  
 meloxicam: CT, clinical trial  
 meloxicam: AE, adverse drug reaction  
 methotrexate: CT, clinical trial  
     methotrexate: CB, drug combination  
 methotrexate: DT, drug therapy  
 minocycline: DT, drug therapy  
 minocycline: CT, clinical trial  
     misoprostol: CB, drug combination  
 misoprostol: DT, drug therapy  
 monoclonal antibody: DV, drug development  
 monoclonal antibody: CT, clinical trial  
 nabumetone: CT, clinical trial  
 nabumetone: DT, drug therapy  
 nabumetone: AE, adverse drug reaction  
 nonsteroid antiinflammatory agent: DT, drug therapy  
 nonsteroid antiinflammatory agent: AE, adverse drug reaction  
 recombinant interleukin 1 receptor blocking agent: DV, drug development  
 rifampicin: CT, clinical trial  
 rifampicin: DT, drug therapy  
 tenidap: AE, adverse drug reaction  
 tenidap: CT, clinical trial  
 tenidap: DT, drug therapy  
 tenidap: PD, pharmacology  
 tumor necrosis factor antibody: DT, drug therapy  
 (cyclosporin) 79217-60-0; (cyclosporin a)  
 59865-13-3, 63798-73-2; (deflazacort) 14484-47-0;  
 (diclofenac) 15307-79-6, 15307-86-5; (immunoglobulin g) 97794-27-9;  
 (leflunomide) 75706-12-6; (meloxicam) 71125-38-7; (methotrexate)  
 15475-56-6, 59-05-2, 7413-34-5; (minocycline) 10118-90-8, 11006-27-2,  
 13614-98-7; (misoprostol) 59122-46-2, 59122-48-4; (nabumetone) 42924-53-8;  
 (rifampicin) 13292-46-1; (tenidap) 100599-27-7, 120210-48-2;  
 (tumor necrosis factor antibody) 162774-06-3

RN

CN Neoral

AB There have been several advances in the therapy of arthritis. These are based on better understanding of the pathogenesis of rheumatic diseases, re-evaluation of previous therapeutic concepts such as combination therapy, and developments within biotechnology. There are 4 main areas of development, mainly involving the treatment of inflammatory synovitis. The first is with anti-inflammatory drugs, where there has been a focus on reducing gastrointestinal toxicity through the use of combination preparations such as diclofenac-misoprostol, and the introduction of drugs with more selectivity for cyclo-oxygenase-2 inhibition such as meloxicam. An additional approach has been the development of anti-inflammatory drugs such as tenidap which also control cytokine metabolism. The second area is slow-acting antirheumatic drugs with the introduction of **cyclosporin** as a single agent or in combination with methotrexate, the development of immunomodulating drugs such as leflunomide, and the demonstration that some antibiotics such as minocycline have slow-acting effects. The third area is the use of corticosteroids including the development of deflazacort as a bone sparing agent, the greater use of intramuscular depot steroids and the validation of low-dose oral corticosteroids in early rheumatoid arthritis. Finally, there have been advances in the biotechnology area with the demonstration that cytokine immunotherapy such as antibodies to tumour necrosis factor can rapidly improve the symptoms of rheumatoid arthritis, and that T cell immunotherapy with antibodies to the CD4 receptor may be effective in reducing synovitis. Many of these agents have not yet been introduced into clinical practice but they show the diversity of drug development and suggest the likelihood of major therapeutic benefits in the next few years.

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ACCESSION NUMBER: 95157766 EMBASE  
DOCUMENT NUMBER: 1995157766  
TITLE: New therapies for rheumatoid arthritis.  
AUTHOR: Richardson C.; Emery P.  
CORPORATE SOURCE: Rheumatology Rehab Research Unit, University of Leeds, 36 Clarendon Road, Leeds LS2 9NZ, United Kingdom  
SOURCE: British Journal of Clinical Practice, (1995) 49/3 (135-139).  
ISSN: 0007-0947 CODEN: BJCPAT  
COUNTRY: United Kingdom  
DOCUMENT TYPE: Journal; (Short Survey)  
FILE SEGMENT: 030 Pharmacology  
031 Arthritis and Rheumatism  
037 Drug Literature Index  
038 Adverse Reactions Titles  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
CT Medical Descriptors:  
\*rheumatoid arthritis: DT, drug therapy  
drug efficacy  
drug mixture  
gastrointestinal symptom: DT, drug therapy  
gastrointestinal symptom: PC, prevention  
gastrointestinal symptom: SI, side effect  
human  
hypertension: SI, side effect  
nephrotoxicity: SI, side effect  
priority journal  
proteinuria: SI, side effect

short survey

Drug Descriptors:

cd4 antigen: EC, endogenous compound

**cyclosporin a: AE, adverse drug reaction**

**cyclosporin a: DT, drug therapy**

**diclofenac: CB, drug combination**

diclofenac: DT, drug therapy

etodolac: DT, drug therapy

hr 325: DT, drug therapy

immunomodulating agent: AE, adverse drug reaction

immunomodulating agent: DT, drug therapy

interleukin 1 receptor blocking agent: DT, drug therapy

l 771726: DT, drug therapy

leflunomide: PK, pharmacokinetics

leflunomide: DT, drug therapy

meloxicam: DT, drug therapy

misoprostol: DT, drug therapy

**misoprostol: CB, drug combination**

monoclonal antibody: DT, drug therapy

nabumetone: PD, pharmacology

nabumetone: PK, pharmacokinetics

nabumetone: DT, drug therapy

nabumetone: AE, adverse drug reaction

naproxen: DT, drug therapy

**naproxen: CB, drug combination**

new drug: DT, drug therapy

new drug: DV, drug development

nonsteroid antiinflammatory agent: DT, drug therapy

**nonsteroid antiinflammatory agent: CB, drug combination**

nonsteroid antiinflammatory agent: AE, adverse drug reaction

prostaglandin synthase inhibitor: DT, drug therapy

tenidap: PD, pharmacology

tenidap: DT, drug therapy

tenidap: AE, adverse drug reaction

tumor necrosis factor alpha: EC, endogenous compound

unclassified drug

RN (cyclosporin a) 59865-13-3, 63798-73-2;

(diclofenac) 15307-79-6, 15307-86-5; (etodolac) 41340-25-4; (leflunomide)

75706-12-6; (meloxicam) 71125-38-7; (misoprostol) 59122-46-2,

59122-48-4; (nabumetone) 42924-53-8; (naproxen) 22204-53-1, 26159-34-2;

(tenidap) 100599-27-7, 120210-48-2

CN L 771726; Hr 325

AB There are two major thrusts in the development of effective treatments in RA: the use and development of entirely new drugs; and the more effective usage of the currently available drugs. This represents a comprehensive review of the pharmacological agents that have been recently developed or will be available in the near future.

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ACCESSION NUMBER: 95071438 EMBASE

DOCUMENT NUMBER: 1995071438

TITLE: Arachidonic acid may mediate the galanin-induced hyperpolarization in parasympathetic neurons from Necturus maculosus.

AUTHOR: Mulvaney J.M.; Parsons R.L.

CORPORATE SOURCE: Department of Anatomy/Neurobiology, University of Vermont, College of Medicine, Burlington, VT 05405, United States

SOURCE: Neuroscience Letters, (1995) 187/2 (95-98).

ISSN: 0304-3940 CODEN: NELED5

COUNTRY: Ireland  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 002 Physiology  
 030 Pharmacology  
 037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

CT Medical Descriptors:

\*hyperpolarization

amphibia

animal tissue

article

controlled study

nonhuman

parasympathetic nerve

priority journal

Drug Descriptors:

\*1 (5 isoquinolinesulfonyl) 2 methylpiperazine: CM, drug comparison

**\*4 bromophenacyl bromide: CB, drug combination**

\*4 bromophenacyl bromide: CM, drug comparison

**\*4 bromophenacyl bromide: IT, drug interaction**

\*4 bromophenacyl bromide: PD, pharmacology

\*arachidonic acid: PD, pharmacology

\*arachidonic acid: DO, drug dose

**\*arachidonic acid: CB, drug combination**

**\*arachidonic acid: IT, drug interaction**

**\*cyclosporin: CM, drug comparison**

\*galanin: PD, pharmacology

**\*galanin: IT, drug interaction**

**\*galanin: CB, drug combination**

\*phospholipase a2: EC, endogenous compound

\*protein kinase inhibitor: CM, drug comparison

\*protein kinase inhibitor: PD, pharmacology

**\*protein kinase inhibitor: CB, drug combination**

RN (1 (5 isoquinolinesulfonyl) 2 methylpiperazine) 84477-87-2; (4 bromophenacyl bromide) 99-73-0; (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (**cyclosporin**) **79217-60-0**; (galanin) 88813-36-9; (phospholipase a2) 9001-84-7

CN (1) H 7

CO (1) Rbi; Sigma; Sandoz (Switzerland)

AB The effects of **arachidonic acid** (AA) and compounds that **inhibit** intracellular signalling pathways on membrane potential and galanin-induced hyperpolarizations were investigated in parasympathetic neurons from *Necturus maculosus*. Treatment for 10-90 min with 10-20  $\mu$ M 4-bromophenacylbromide or 10  $\mu$ M **cyclosporin** A caused a progressive decrease in the amplitude of galanin-induced hyperpolarizations without any change in resting membrane potential. The galanin-induced hyperpolarization was not altered following a 10-120 min treatment with the protein kinase inhibitor H-7. These results indicated that phospholipase A2 activation, but not protein kinase activation, may be required for the galanin-induced hyperpolarization. Arachidonic acid (20-100  $\mu$ M) caused a concentration-dependent membrane hyperpolarization of the parasympathetic neurons and a decrease in the amplitude of the galanin-induced hyperpolarization. These data indicate that phospholipase A2-catalyzed liberation of AA may be involved in the galanin-induced membrane hyperpolarization observed in mudpuppy parasympathetic neurons.

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ACCESSION NUMBER: 94357321 EMBASE

DOCUMENT NUMBER: 1994357321  
 TITLE: Tepoxalin, a novel immunosuppressive agent with a different mechanism of action from **cyclosporin A**.  
 AUTHOR: Zhou L.; Ritchie D.; Wang E.Y.; Barbone A.G.; Argentieri D.; Lau C.Y.  
 CORPORATE SOURCE: Biologic Research, R. W. Johnson Pharmaceut. Res. Inst., 19 Green Belt Drive, Don Mills, Ont. M3C 1L9, Canada  
 SOURCE: Journal of Immunology, (1994) 153/11 (5026-5037).  
 ISSN: 0022-1767 CODEN: JOIMA3  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 026 Immunology, Serology and Transplantation  
 030 Pharmacology  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English  
 CT Medical Descriptors:  
   \*t lymphocyte  
   animal cell  
   article  
   controlled study  
   drug potency  
   drug potentiation  
   flow cytometry  
   gene  
   human  
   human cell  
   lymphocyte proliferation  
   mouse  
   nonhuman  
   polymerase chain reaction  
   priority journal  
   signal transduction  
 Drug Descriptors:  
   \*cyclosporin a: CM, drug comparison  
   \*cyclosporin a: DO, drug dose  
   \*cyclosporin a: PD, pharmacology  
   \*cyclosporin a: IT, drug interaction  
   \*cyclosporin a: AD, drug administration  
   \*interleukin 2: EC, endogenous compound  
   \*lipoxigenase: EC, endogenous compound  
   \*lipoxigenase inhibitor: IT, drug interaction  
   \*lipoxigenase inhibitor: CM, drug comparison  
   \*lipoxigenase inhibitor: PD, pharmacology  
   \*propionamide derivative: IT, drug interaction  
   \*propionamide derivative: CM, drug comparison  
   \*propionamide derivative: PD, pharmacology  
   \*prostaglandin synthase: EC, endogenous compound  
   \*prostaglandin synthase inhibitor: PD, pharmacology  
   \*prostaglandin synthase inhibitor: IT, drug interaction  
   \*prostaglandin synthase inhibitor: CM, drug comparison  
   zileuton  
   aminophenol derivative  
   cd3 antigen: EC, endogenous compound  
   cd4 antigen: EC, endogenous compound  
   cd8 antigen: EC, endogenous compound  
   cytokine: EC, endogenous compound  
   dna: EC, endogenous compound  
   gamma interferon: EC, endogenous compound  
   immunosuppressive agent: CM, drug comparison



**immunosuppressive agent: IT, drug interaction**

immunosuppressive agent: PD, pharmacology

interleukin 2 receptor: EC, endogenous compound

ionomycin

leukotriene b4

messenger rna: EC, endogenous compound

naproxen

okt 3

phorbol 13 acetate 12 myristate

prostaglandin e2

**recombinant interleukin 2**

tepoxalin: CM, drug comparison

**tepoxalin: IT, drug interaction**

tepoxalin: PD, pharmacology

RN (cyclosporin a) 59865-13-3, 63798-73-2;  
(interleukin 2) 85898-30-2; (lipoxygenase) 9027-17-2, 9029-60-1;  
(prostaglandin synthase) 39391-18-9, 59763-19-8,  
9055-65-6; (zileuton) 111406-87-2, 132880-11-6; (dna) 9007-49-2;  
(gamma interferon) 82115-62-6; (ionomycin) 56092-81-0; (leukotriene b4)  
71160-24-2; (naproxen) 22204-53-1, 26159-34-2; (okt 3) 140608-64-6;  
(phorbol 13 acetate 12 myristate) 16561-29-8; (prostaglandin e2) 363-24-6;  
(recombinant interleukin 2) 110942-02-4; (tepoxalin)  
103475-41-8

CN (1) Sandimmune

CO (1) Sandoz (Canada); R w johnson pharmaceutical research institute (United States)

AB Tepoxalin, a compound previously identified as a **dual cyclooxygenase/lipoxygenase (CO/LO) inhibitor**, is a potent inhibitor of T cell proliferation. Comparing the suppressive effects of tepoxalin and **cyclosporin A (CsA)** on OKT3-, PMA-, IL-2-, and PMA + ionomycin-induced T cell proliferations revealed marked differences in the mechanism of action between the two compounds. Whereas CsA was most effective in suppressing OKT3- stimulated proliferation, tepoxalin was more potent in inhibiting PMA-, PMA + ionomycin-, and IL-2-induced proliferation. Quantitative PCR (QPCR) assays used to detect cytokine messages showed that tepoxalin blocked IL-2 mRNA transcription in PMA- and PMA + ionomycin-, but not OKT3-stimulated T cells whereas CsA was most potent in inhibiting OKT3-induced IL-2 mRNA induction in these cells. Both tepoxalin and CsA did not inhibit the expression of IL-2R; however, only tepoxalin, but not CsA, inhibited the proliferation of IL-2-dependent blasts and the transcription of IFN- $\gamma$ , an IL-2-dependent target gene. Moreover, addition of exogenous IL-2 restored OKT3-induced proliferation to CsA- but not tepoxalin-treated cells. These data suggest that tepoxalin, but not CsA, suppressed T cell proliferation by inhibiting IL-2-induced signal transduction. Consistent with these findings, tepoxalin, unlike CsA, which was most potent when added at the initiation of OKT3 stimulation, was equally active, regardless of whether it was added at the beginning or 48 h after culture initiation. The difference in mechanism of action between tepoxalin and CsA was confirmed further by the **synergistic** suppressive effects on T cell proliferation upon co-administration of the two compounds.

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ACCESSION NUMBER: 93280287 EMBASE

DOCUMENT NUMBER: 1993280287

TITLE: Lysophospholipid-mediated inhibition of Na<sup>+</sup>,K<sup>+</sup>-adenosine triphosphatase is a possible mechanism of immunosuppressive activity of **cyclosporin A**.

AUTHOR: Anderson R.; Smit M.J.; Van Rensburg C.E.J.

CORPORATE SOURCE: Institute for Pathology, P.O. Box 2034, Pretoria 0001, South Africa  
 SOURCE: Molecular Pharmacology, (1993) 44/3 (605-614).  
 ISSN: 0026-895X CODEN: MOPMA3  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 026 Immunology, Serology and Transplantation  
 030 Pharmacology  
 037 Drug Literature Index  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English

## CT Medical Descriptors:

\*enzyme inhibition  
 \*immunosuppressive treatment  
 article  
 controlled study  
 dose response  
 drug mechanism  
 enzyme activity  
 human  
 human cell  
 lymphocyte activation  
 lymphocyte proliferation  
 nephrotoxicity  
 priority journal  
 t lymphocyte

## Drug Descriptors:

\*adenosine triphosphatase (potassium sodium): EC, endogenous compound  
 \*cyclosporin a: CB, drug combination  
 \*cyclosporin a: DO, drug dose  
 \*cyclosporin a: PD, pharmacology  
 \*lysophospholipid  
 1 (5 isoquinolinesulfonyl) 2 methylpiperazine: PD, pharmacology  
 alpha tocopherol: CB, drug combination  
 alpha tocopherol: PD, pharmacology  
 arachidonic acid  
 butylated hydroxyanisole: PD, pharmacology  
 butylated hydroxyanisole: CB, drug combination  
 butylcresol: PD, pharmacology  
 butylcresol: CB, drug combination  
 catalase  
 cysteine  
 indometacin: PD, pharmacology  
 lipoxygenase inhibitor: PD, pharmacology  
 lysophosphatidylcholine  
 lysophospholipase: EC, endogenous compound  
 nordihydroguaiaretic acid: PD, pharmacology  
 phytohemagglutinin  
 piroxicam: PD, pharmacology  
 potassium ion  
 prostaglandin e2  
 prostaglandin synthase  
 protein kinase c  
 retinol: PD, pharmacology  
 staurosporine: PD, pharmacology  
 thymidine

RN (cyclosporin a) 59865-13-3, 63798-73-2; (1  
 (5 isoquinolinesulfonyl) 2 methylpiperazine) 84477-87-2; (alpha  
 tocopherol) 1406-18-4, 1406-70-8, 52225-20-4, 58-95-7, 59-02-9;  
 (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (butylated

hydroxyanisole) 25013-16-5; (butylcresol) 128-37-0, 30587-81-6; (catalase) 9001-05-2; (cysteine) 4371-52-2, 52-89-1, 52-90-4; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (lysophosphatidylcholine) 93794-93-5; (lysophospholipase) 9001-85-8; (nordihydroguaiaretic acid) 500-38-9; (phytohemagglutinin) 9008-97-3; (piroxicam) 36322-90-4; (potassium ion) 24203-36-9; (prostaglandin e2) 363-24-6; (prostaglandin synthase) **39391-18-9**, **59763-19-8**, 9055-65-6; (protein kinase c) 141436-78-4; (retinol) 68-26-8, 82445-97-4; (staurosporine) 62996-74-1; (thymidine) 50-89-5

CO Sandoz (Switzerland); Sigma (United States); Hoffmann la roche (Switzerland); Pfizer (South Africa)

AB The relationship between the phospholipase-stimulating and immunosuppressive properties of **cyclosporin A** (CsA) has been investigated in vitro. At concentrations of 0.025  $\mu$ M and upwards, CsA caused dose-related inhibition of both mitogen- and alloantigen-stimulated uptake of tritiated thymidine by human mononuclear leukocytes (MNL), which was associated with a time- and dose-related enhancement of the generation of lysophosphatidylcholine (LPC), arachidonic acid, and prostaglandin E2 from mitogen-stimulated cells. Arachidonate alone, at concentrations of up to 20  $\mu$ M, did not affect lymphocyte activation, whereas **cyclooxygenase** and **5'- lipoxigenase inhibitors** failed to protect the cells against the antiproliferative effects of CsA. However, LPC caused dose-related inhibition of MNL proliferation. Moreover, coincubation of MNL with  $\alpha$ -tocopherol, a lysophospholipid-complexing agent, or with lysophospholipase protected the cells against CsA, as well as against LPC. The Na<sup>+</sup>,K<sup>+</sup>-ATPase activity of mitogen-activated lymphocytes was also inhibited by CsA, whereas inclusion of  $\alpha$ -tocopherol or lysophospholipase protected this enzyme. Excessive production of lysophospholipids and consequent inhibition of Na<sup>+</sup>,K<sup>+</sup>-ATPase during CsA treatment of mitogen- or antigen-activated lymphocytes is a possible biochemical mechanism of the immunosuppressive activity of this agent.

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ACCESSION NUMBER: 92218798 EMBASE  
DOCUMENT NUMBER: 1992218798  
TITLE: Possible mechanism of immunosuppressive effect of scoparone (6,7-dimethoxycoumarin).  
AUTHOR: Huang H.-C.; Huang Y.-L.; Chang J.-H.; Chen C.-C.; Lee Y.-T.  
CORPORATE SOURCE: Department of Pharmacology, College of Medicine, National Taiwan University, No. 1, Jen-Ai Road, Taipei, Taiwan, Province of China  
SOURCE: European Journal of Pharmacology, (1992) 217/2-3 (143-148).  
ISSN: 0014-2999 CODEN: EJPHAZ  
COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 022 Human Genetics  
026 Immunology, Serology and Transplantation  
029 Clinical Biochemistry  
030 Pharmacology  
037 Drug Literature Index  
LANGUAGE: English  
SUMMARY LANGUAGE: English  
CT Medical Descriptors:  
\*arachidonic acid metabolism  
\*lymphocyte proliferation  
\*mixed lymphocyte reaction  
\*mononuclear cell

article  
 concentration response  
 controlled study  
 enzyme immunoassay  
 gene expression  
 human  
 human cell  
 normal human  
 priority journal  
 Drug Descriptors:  
 interleukin 2 receptor

\*cyclosporin: PD, pharmacology

\*cyclosporin: CM, drug comparison

\*genistein: PD, pharmacology

\*genistein: CM, drug comparison

\*immunosuppressive agent: CM, drug comparison

\*immunosuppressive agent: PD, pharmacology

\*interleukin 1: EC, endogenous compound

\*interleukin 2: EC, endogenous compound

\*scoparone: CM, drug comparison

\*scoparone: PD, pharmacology

2,3 dinorthromboxane b2: EC, endogenous compound

alloxan: TO, drug toxicity

enzyme inhibitor: PD, pharmacology

enzyme inhibitor: CM, drug comparison

indometacin: PD, pharmacology

leukotriene b4: EC, endogenous compound

mepacrine: PD, pharmacology

nordihydroguaiaretic acid: PD, pharmacology

phytohemagglutinin: PD, pharmacology

prostaglandin e2: EC, endogenous compound

prostaglandin f2 alpha: EC, endogenous compound

protein tyrosine kinase: EC, endogenous compound

thromboxane derivative: EC, endogenous compound

RN (cyclosporin) 79217-60-0; (genistein) 446-72-0;  
 (interleukin 2) 85898-30-2; (scoparone) 120-08-1; (2,3 dinorthromboxane  
 b2) 63250-09-9; (alloxan) 3237-50-1, 50-71-5; (indometacin) 53-86-1,  
 74252-25-8, 7681-54-1; (leukotriene b4) 71160-24-2; (mepacrine) 69-05-6,  
 83-89-6; (nordihydroguaiaretic acid) 500-38-9; (phytohemagglutinin)  
 9008-97-3; (prostaglandin e2) 363-24-6; (prostaglandin f2 alpha) 551-11-1;  
 (protein tyrosine kinase) 80449-02-1

CO Aldrich (United States); Gibco (United States); Sigma (United States);  
 Sandoz (Switzerland); Biomol research laboratories (United States)

AB The possible mechanism of the immunosuppressive effect of scoparone  
 (6,7-dimethoxycoumarin) was investigated. Human peripheral blood  
 mononuclear cells (106 cells/ml) were stimulated with 0.25%  
 phytohemagglutinin (PHA) and the proliferative response was determined  
 from the uptake of tritiated thymidine. Scoparone (10<sup>-6</sup> to 3 x 10<sup>-4</sup> M)  
 reduced the proliferative response in a dose-dependent manner. The  
 proliferative response of mononuclear cells to **mixed** lymphocyte  
 reaction was also reduced by scoparone (10<sup>-5</sup> to 10<sup>-4</sup> M). Interleukin-1,  
 interleukin-2 production and interleukin-2 receptor expression were all  
 reduced in the presence of scoparone. Scoparone (10 and 30 µM)  
 significantly reduced the suppression elicited by the diabetogenic drug,  
 alloxan (10 mM). The suppressive activity of scoparone was significantly  
 reduced by quinacrine (a phospholipase A2 **inhibitor**),  
 indomethacin (a **cyclooxygenase inhibitor**) and  
 nordihydroguaiaretic acid (a **lipxygenase inhibitor**).  
 The levels of prostaglandin E2, prostaglandin F(2α), leukotriene B4  
 and 2,3-dinor-thromboxane B2 in culture medium of PHA-stimulated

mononuclear cells, measured with an enzyme immunoassay, were elevated by scoparone treatment. We compared the effect of scoparone on the mononuclear cell response to genistein, a specific inhibitor of protein tyrosine kinase and demonstrated the non-additivity and cross-desensitization of the two compounds. Our results suggest that the immunosuppressive effect of scoparone may be exerted in part through inhibition of protein tyrosine kinase and release of arachidonic acid metabolites.

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ACCESSION NUMBER: 89203323 EMBASE

DOCUMENT NUMBER: 1989203323

TITLE: **Interaction of cyclosporine-A** with the  
renin-angiotensin system in canine veins.

AUTHOR: Muler-Schweinitzer E.

CORPORATE SOURCE: Preclinical Research, Sandoz Ltd., CH-4002 Basle,  
Switzerland

SOURCE: Naunyn-Schmiedeberg's Archives of Pharmacology, (1989)  
340/2 (252-257).

ISSN: 0028-1298 CODEN: NSAPCC

COUNTRY: Germany

DOCUMENT TYPE: Journal

FILE SEGMENT: 002 Physiology  
030 Pharmacology  
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

CT Medical Descriptors:

\*renin angiotensin aldosterone system

\*saphenous vein

dog

drug concentration

vasoconstriction

vasodilatation

animal experiment

animal cell

nonhuman

intravenous drug administration

oral drug administration

priority journal

Drug Descriptors:

\*cyclosporin a: PD, pharmacology

angiotensin

angiotensin i

bradykinin

clopramin

dazoxiben

enalaprilat

h 77

indometacin

kallikrein

noradrenalin

nordihydroguaiaretic acid

papaverine

prostaglandin f2 alpha

unclassified drug

RN (cyclosporin a) 59865-13-3, 63798-73-2;

(angiotensin) 11128-99-7, 1407-47-2; (angiotensin i) 9041-90-1;

(bradykinin) 58-82-2, 5979-11-3; (dazoxiben) 74226-22-5, 78218-09-4;

(enalaprilat) 76420-72-9; (h 77) 82131-82-6, 82167-03-1; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (kallikrein) 8006-48-2, 9001-01-8; (noradrenalin) 1407-84-7, 51-41-2; (nordihydroguaiaretic acid) 500-38-9; (papaverine) 58-74-2, 61-25-6; (prostaglandin f2 alpha) 551-11-1

CN (1) H 77; (2) Hypertensin; (3) Paveron; (4) Sandimmune

CO (1) Bachem (Switzerland); (2) Ciba geigy (Switzerland); (3) Karlspharma (Germany); (4) Sandoz (Switzerland); Hoechst (Germany); Sigma (Germany); Merck sharp and dohme (United States); Pfizer (United Kingdom)

AB Responses of canine saphenous veins to bradykinin and angiotensin and the effect of **cyclosporine-A** were investigated both in conscious dogs in vivo and on ring preparations from canine saphenous veins in vitro. In vivo local infusion of bradykinin into the saphenous vein elicited dose-dependent reduction in compliance, i.e., venoconstriction, whereas local infusion of angiotensin elicited dose-dependent venodilation, which was markedly enhanced during blockade of endogenous thromboxane A2 synthesis by dazoxiben (2.5 mg/kg i.v.). The venoconstrictor response to bradykinin was attenuated after oral administration of both the thiazide-like diuretic clopamide (0.5 mg/kg) or **cyclosporine-A** (30 mg/kg), and by concomitant local infusion of **cyclosporine-A** (1-10 µg/min). Systemic i.v. infusion of the renin inhibitor H-77 (0.1 mg/kg/h) reversed the inhibition of bradykinin by both clopamide and **cyclosporine-A**. In vitro bradykinin elicited relaxation at low (0.1-10 nmol/l) but constriction at higher concentrations. The venoconstrictor response to bradykinin was resistant to blockade of thromboxane A2 synthesis and only partially attenuated after selective **blockade of cyclooxygenase or lipoxxygenase**. Concomitant **blockade of both lipoxxygenase and cyclooxygenase** activity by nordihydroguaiaretic acid (NDGA 10-30 µmol/l) nearly abolished the contractile response thereby enhancing the relaxant component of the bradykinin effect. Angiotensin II also elicited biphasic responses of partially contracted venous rings. Concomitant **blockade of both lipoxxygenase and cyclooxygenase** by NDGA (10 µmol/l) again attenuated the contractile component of the angiotensin effect thereby unmasking the venodilator activity which could be inhibited by the angiotensin II receptor blocker saralasin (0.01 -1 µmol/l). Blockade of converting enzyme by enalaprilic acid, the active metabolite of the converting enzyme inhibitor enalapril, attenuated responses to angiotensin I but shifted the concentration-response curve to bradykinin to the left. Compared to angiotensin I or angiotensin II, angiotensinogen was about ten times less potent in relaxing venous rings, but its potency was enhanced by a factor 10 in the presence of the serine protease kallikrein. Neither in the absence nor in the presence of kallikrein did the renin inhibitor H-77 modify the venodilator responses to angiotensinogen in vitro. Furthermore, venous responses to both bradykinin and angiotensinogen were unchanged in rings incubated for 1 h with 1 µmol/l **cyclosporine-A**. It is suggested, that the venoconstrictor response to bradykinin is mediated through enhanced formation and/or release of both prostaglandins and leukotrienes and that the bradykinin effect is modulated by endogenous angiotensin. Furthermore, the present data suggest (1) that the canine saphenous vein possesses a local renin-angiotensin system with activatable angiotensin forming enzyme(s) and (2) that activation of circulating prorenin rather than of tissue renin contributes to the vascular effect of **cyclosporine-A**.

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ACCESSION NUMBER: 87050286 EMBASE

DOCUMENT NUMBER: 1987050286

TITLE: Prolactin-dependent mitogenesis in Nb 2 node lymphoma

cells: Effects of immunosuppressive cyclopeptides.  
 AUTHOR: Russell D.H.; Buckley A.R.; Montgomery D.W.; et al.  
 CORPORATE SOURCE: Department of Pharmacology, University of Arizona College  
 of Medicine, Tucson, AZ 85724, United States  
 SOURCE: Journal of Immunology, (1987) 138/1 (276-284).  
 CODEN: JOIMA3  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal  
 FILE SEGMENT: 037 Drug Literature Index  
 030 Pharmacology  
 003 Endocrinology  
 026 Immunology, Serology and Transplantation  
 025 Hematology  
 016 Cancer  
 LANGUAGE: English

CT Medical Descriptors:

\*drug efficacy

**\*drug interaction**

\*drug receptor binding

\*lymphoma cell

mitogenesis

rat

tumor cell culture

priority journal

drug administration

methodology

nonhuman

lymphatic system

in vitro study

Drug Descriptors:

**\*cyclosporin**

**\*cyclosporin a**

\*didemnin b

\*ornithine decarboxylase

\*prolactin

\*prolactin receptor

\*protein kinase c

calcimycin

indometacin

phorbol ester

radioisotope

RN (cyclosporin) 79217-60-0; (cyclosporin a)  
 59865-13-3, 63798-73-2; (didemnin b) 77327-05-0;  
 (ornithine decarboxylase) 9024-60-6; (prolactin) 12585-34-1, 50647-00-2,  
 9002-62-4; (protein kinase c) 141436-78-4; (calcimycin) 52665-69-7;  
 (indometacin) 53-86-1, 74252-25-8, 7681-54-1

CO Sandoz (Switzerland); Sigma (United States)

AB Prolactin (PRL)-stimulated ornithine decarboxylase (ODC) activity and  
 subsequent proliferation are inhibited by the cyclopeptides  
**cyclosporine** (CsA) and didemnin B (DB) in Nb 2 node lymphoma  
 cells. Similar concentrations of these agents also inhibit 125I-PRL  
 binding, suggesting that their inhibitory effects on these PRL-dependent  
 physiologic responses are mediated at least in part at the level of PRL  
 receptor **interactions**. The phorbol ester TPA stimulated ODC  
 activity and [3H]thymidine incorporation to 54% and 31% that of a  
 near-optimal mitogenic concentration of PRL (10 ng/ml), suggesting that  
 mitogenesis in these cells is coupled to some degree to the activation of  
 protein kinase C (PKC). The calcium ionophore A23187 increased ODC  
 activity only slightly and actually decreased [3H]thymidine incorporation  
 to a value below the 'cells only' controls. The addition of TPA plus

A23187 did not further enhance the effects of TPA to elevate ODC activity and [3H]thymidine incorporation. However, A23187 significantly elevated PRL-stimulated ODC activity with a subsequent inhibition of [3H]thymidine incorporation, suggesting a block of entry into S phase. Both cyclopeptides decreased the elevation of ODC activity in G1 phase of cell cycle in response to PRL, suggestive of a site of action for these agents in early G1, a conclusion compatible with their ability to inhibit PRL binding to these cells. Addition of CsA or CB2 hr after PRL had no effect on PRL-stimulated ODC activity detectable at 6 hr, but addition of either as late as 6 hr still affected the extent of mitogenesis. This is in line with the requirement for PRL to be present in the culture medium for a minimum of 3 to 6 hr to invoke a maximal effect on mitogenesis. Addition of either cyclopeptide after the cells were in S phase had no effect on the extent of [3H]thymidine incorporation. An **inhibitor** of the **cyclooxygenase** pathway (indomethacin) enhanced both PRL-stimulated ODC activity and proliferation, whereas **inhibition** of the **lipoxxygenase** pathway by NDGA attenuated only proliferation, suggesting that in Nb 2 cells, products of the lipoxxygenase pathway may contribute to the mechanism of PRL-stimulated mitogenesis. Because Nb 2 lymphoma cells were derived from estrogenized rats, estrogen was tested as a mitogen. By itself it was not mitogenic, but in conjunction with PRL, estradiol-17 $\beta$  elevated the ODC response and inhibited proliferation. Inhibitors of PKC known to have minimal effects on RNA synthesis, quercetin and gossypol, totally inhibited both the elevations of ODC activity and [3H]thymidine incorporation in response to PRL in Nb 2 lymphoma cells. Quinacrine, an inhibitor of phospholipase A2 and C activities, also inhibited PRL-stimulated ODC activity and mitogenesis. These data suggest that a common physiologic site of action of the cyclopeptides CsA and DB in Nb 2 lymphoma cells is the alteration of PRL receptor-mediated activity, and further substantiate a role for PKC in the coupling of PRL receptors to the stimulation of ODC activity and mitogenesis in Nb 2 lymphoma cells.

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ACCESSION NUMBER: 86089045 EMBASE  
DOCUMENT NUMBER: 1986089045  
TITLE: Modulation of mouse ear edema by **cyclooxygenase** and **lipoxxygenase inhibitors** and other pharmacologic agents.  
AUTHOR: Carlson R.P.; O'Neill-Davis L.; Chang J.; Lewis A.J.  
CORPORATE SOURCE: Department of Experimental Therapeutics, Wyeth Laboratories, Inc., Philadelphia, PA 19101, United States  
SOURCE: Agents and Actions, (1985) 17/2 (197-204).  
CODEN: AGACBH  
COUNTRY: Switzerland  
DOCUMENT TYPE: Journal  
FILE SEGMENT: 037 Drug Literature Index  
030 Pharmacology  
LANGUAGE: English  
CT Medical Descriptors:  
\*capillary permeability  
\*diphenyl disulfide  
\*edema  
animal model  
ear  
mouse  
auditory system  
peripheral vascular system  
oral drug administration



nonhuman

animal experiment

Drug Descriptors:

\*tomelukast

\*phenidone

\*2 aminomethyl 4 tert butyl 6 iodophenol

\*[2 cyano 3 (methylamino)anilino]oxoacetic acid

\*[[3 [3 (4 acetyl 3 hydroxy 2 propylphenoxy) 2 hydroxypropoxy] 2 cyanophenyl]amino]oxoacetic acid ethyl ester

\*acetylsalicylic acid

\*alpha pentyl 3 (2 quinolylmethoxy)benzyl alcohol

\*antiinflammatory agent

\*arachidonic acid

\*atropine

\*auranofin

\*benoxaprofen

\*betamethasone

\*3 amino 1 (3 trifluoromethylphenyl) 2 pyrazoline

\*chloroquine

\*chlorpheniramine

\*chlorpromazine

\*cimetidine

**\*prostaglandin synthase inhibitor**

\*cyclophosphamide

**\*cyclosporin a**

\*dapsone

\*dazoxiben

\*desipramine

\*dexamethasone

\*diazepam

\*etretinate

\*fentiazac

\*forskolin

\*glyceryl trinitrate

\*haloperidol

\*hydrochlorothiazide

\*ibuprofen

\*indometacin

\*isosorbide dinitrate

\*isotretinoin

\*levamisole

**\*lipoxigenase inhibitor**

\*methylprednisolone

\*methysergide

\*nafazatrom

\*phorbol 13 acetate 12 myristate

\*piroxicam

\*promethazine

\*timegadine

\*tolmetin

\*zomepirac

6 anilino 5,8 quinolinequinone

RN (tomelukast) 88107-10-2; (phenidone) 92-43-3; (2 aminomethyl 4 tert butyl 6 iodophenol) 58456-91-0; ([2 cyano 3 (methylamino)anilino]oxoacetic acid) 63365-44-6; ([[3 [3 (4 acetyl 3 hydroxy 2 propylphenoxy) 2 hydroxypropoxy] 2 cyanophenyl]amino]oxoacetic acid ethyl ester) 91327-53-6; (acetylsalicylic acid) 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1; (alpha pentyl 3 (2 quinolylmethoxy)benzyl alcohol) 101910-24-1; (arachidonic acid) 506-32-1, 6610-25-9, 7771-44-0; (atropine) 51-55-8, 55-48-1; (auranofin) 34031-32-8; (benoxaprofen)

51234-28-7; (betamethasone) 378-44-9; (3 amino 1 (3 trifluoromethylphenyl) 2 pyrazoline) 66000-40-6; (chloroquine) 132-73-0, 3545-67-3, 50-63-5, 54-05-7; (chlorpheniramine) 132-22-9; (chlorpromazine) 50-53-3, 69-09-0; (cimetidine) 51481-61-9, 70059-30-2; (cyclophosphamide) 50-18-0; (cyclosporin a) 59865-13-3, 63798-73-2; (dapson) 80-08-0; (dazoxiben) 74226-22-5, 78218-09-4; (desipramine) 50-47-5, 58-28-6; (dexamethasone) 50-02-2; (diazepam) 439-14-5; (etretinate) 54350-48-0; (fentiazac) 18046-21-4; (forskolin) 66575-29-9; (glyceryl trinitrate) 55-63-0; (haloperidol) 52-86-8; (hydrochlorothiazide) 58-93-5; (ibuprofen) 15687-27-1; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (isosorbide dinitrate) 87-33-2; (isotretinoin) 4759-48-2; (levamisole) 14769-73-4, 16595-80-5; (methylprednisolone) 6923-42-8, 83-43-2; (methysergide) 16509-15-2, 361-37-5, 62288-72-6; (nafazatrom) 59040-30-1; (phorbol 13 acetate 12 myristate) 16561-29-8; (piroxicam) 36322-90-4; (promethazine) 58-33-3, 60-87-7; (timegadine) 71079-19-1; (tolmetin) 26171-23-3, 35711-34-3; (zomepirac) 33369-31-2, 64092-48-4; (6 anilino 5,8 quinolinequinone) 91300-60-6

CN Aspirin; Bw 775 c; Mk 447; Wy 44329; Ly 83583; Ly 171883; Rev 5901 a; Wy 41195

CO Nu chek; Sk & f; Merck; Richardson merrell; Mcneil; Upjohn; Leo; Sigma; Lilly; Aldrich; Pfizer; Merck sharp and dohme; Sandoz; Knoll; Whitehall; Mead johnson; Wyeth; Ives; Miles; Ayerst

AB **Inhibitors of arachidonic acid (AA) metabolism and other pharmacologic agents were evaluated against ear edema produced in mice by tetradecanoylphorbol acetate (TPA) or AA. Drugs were administered orally and topically either 30 min prior to AA or 30 min after TPA, except for steroids which were administered 2.5-3 hr prior to AA. Several cyclooxygenase (CO) inhibitors including indomethacin, aspirin, piroxicam and timegadine were without effect when administered orally against either irritant; the same drugs inhibited TPA edema when they were administered topically. Mixed CO/lipoxygenase (LO) inhibitors, phenidone and BW755C, were active orally against AA edema (ED50s of 84 and 65 mg/kg, respectively) and against TPA edema (ED50s of 235 and 88 mg/kg, respectively). Phenidone was more active topically against AA edema (ED50, 0.1 mg/ear) than BW755C (ED50, 2.8 mg/ear); however, BW755C was more active topically against TPA edema (ED50, 0.2 mg/ear) than phenidone (ED50, 0.6 mg/ear). Methylprednisolone was very effective in the AA (oral ED50, 17 mg/kg; topical ED50, > 1 mg/ear) and TPA models (oral ED50, 4.3 mg/kg; topical ED50, 0.03 mg/ear. MK-447 was topically and orally effective only in the TPA model. Not surprisingly, drugs were more effective topically than orally in both mouse ear edema assays. The models were somewhat selective for CO and CO/LO inhibitors; however, dapson) was orally effective in the ear models, and a number of mediator antagonists and CNS drug, especially anti-psychotics were topically active primarily against TPA edema. These models may be useful for the detection of in vivo activity of CO/LO or 5-LO inhibitors.**

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=> d que l174

L164	364	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	GREGORY, S?/AU
L165	148	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ISAKSON, P?/AU
L166	2490	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	ANDERSON, G?/AU
L167	2960	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	(L164 OR L165 OR L166)
L168	91	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L167 AND ?CYCLOOXYGENASE?
L169	10	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L168 AND ?LIPOXYGENASE?
L173	76	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	FENNESSY, M?/AU
L174	8	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L169 NOT L173

=>

=> d que l181

L175	658	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	GREGORY, S?/AU
L176	188	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	ISAKSON, P?/AU
L177	3136	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	ANDERSON, G?/AU
L178	3938	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	(L175 OR L176 OR L177)
L179	113	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	L178 AND (?CYCLOOXYGENAS? OR COX)
L180	21	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	L179 AND (?LIPOXYGENAS? OR ?ARACHIDON?)
L181	18	SEA	FILE=BIOSIS	ABB=ON	PLU=ON	L180 AND ?INHIBIT?

=> FIL STNGUIDE

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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 23, 2004 (20040723/UP).

=> dup rem l174 l181

FILE 'HCAPLUS' ENTERED AT 12:20:05 ON 30 JUL 2004  
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FILE 'BIOSIS' ENTERED AT 12:20:05 ON 30 JUL 2004  
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PROCESSING COMPLETED FOR L174  
PROCESSING COMPLETED FOR L181  
L204 23 DUP REM L174 L181 (3 DUPLICATES REMOVED)  
ANSWERS '1-8' FROM FILE HCAPLUS  
ANSWERS '9-23' FROM FILE BIOSIS

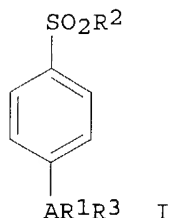
=> d ibib abs 1-

YOU HAVE REQUESTED DATA FROM 23 ANSWERS - CONTINUE? Y/(N):y

L204 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2000:754502 HCAPLUS  
 DOCUMENT NUMBER: 133:321880  
 TITLE: Treatment of inflammation and inflammation-related disorders with a combination of a **cyclooxygenase-2** inhibitor and a 5-**lipoxxygenase** inhibitor.  
 INVENTOR(S): Isakson, Peter C.; Anderson, Gary D.; Gregory, Susan A.  
 PATENT ASSIGNEE(S): G.D. Searle and Co., USA  
 SOURCE: U.S., 21 pp., Cont.-in-part of U.S. Ser. No. 489,472, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6136839	A	20001024	US 1996-661660	19960611
CA 2224517	AA	19961227	CA 1996-2224517	19960611
PRIORITY APPLN. INFO.:			US 1995-489472	B2 19950612
OTHER SOURCE(S):		MARPAT 133:321880		

GI



AB A combination comprising a 5-**lipoxxygenase** inhibitor and a **cyclooxygenase-2** inhibitor selected from title compds. [I; A = pyrazolyl; R1 =  $\geq 1$  of (substituted) heterocyclyl, cycloalkyl, cycloalkenyl, aryl; R2 = Me, amino; R3 = H, halo, alkyl, alkenyl, alkynyl, oxo, cyano, CO2H, cyanoalkyl, heterocyclyloxy, alkoxy, alkylthio, alkylcarbonyl, aryl, haloalkyl, etc.], is claimed. Thus, EtO2CCHF2 in MeOCMe3 was treated with NaOMe and then with 3-fluoro-4-methoxyacetophenone (preparation given) followed by 16 h stirring to give 96% 4,4-difluoro-1-(3-fluoro-4-methoxyphenyl)butane-1,3-dione. This was refluxed 16 h with 4-sulfonamidophenylhydrazine hydrochloride in EtOH to give 87% 4-[5-(3-fluoro-4-methoxyphenyl)-3-difluoromethyl-1H-pyrazol-1-yl]benzenesulfonamide (II). II with 6-[[3-fluoro-5-(3,4,5,6-tetrahydro-4-methoxy-2H-pyran-4-yl)phenoxy]methyl]-1-methyl-1H-quinazolin-2-one (III) at 30 mpk/day orally in mice in the collagen-induced arthritis screen reduced incidence of arthritis to 20% (vs. 100% for controls). A formulation containing II and III is given.

REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L204 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2  
 ACCESSION NUMBER: 1994:455773 HCAPLUS  
 DOCUMENT NUMBER: 121:55773

TITLE: In vivo characterization of zymosan-induced mouse peritoneal inflammation

AUTHOR(S): Rao, Tadimeti S.; Currie, Jerry L.; Shaffer, Alex F.; Isakson, Peter C.

CORPORATE SOURCE: Inflammatory Dis. Res., Searle Res. Dev., St. Louis, MO, USA

SOURCE: Journal of Pharmacology and Experimental Therapeutics (1994), 269(3), 917-25  
CODEN: JPETAB; ISSN: 0022-3565

DOCUMENT TYPE: Journal

LANGUAGE: English

AB I.p. administration of zymosan to mice resulted in marked biosynthesis of eicosanoids and influx of neutrophils with distinct time course profiles. 6-Keto-prostaglandin-Fl $\alpha$  (6-KPA) increased between 30 and 60 min and rapidly decreased thereafter. Leukotriene (LT)C<sub>4</sub> levels showed similar patterns, but were sustained for several hours. LTB<sub>4</sub> increased in a biphasic manner with peak increases between 2 to 3 h. Repeated injections with zymosan suggested that incoming neutrophils generate most of the LTB<sub>4</sub>. Myeloperoxidase (MPO), an enzyme marker for neutrophils, continued to increase throughout the time course. Mast cells regulate LTB<sub>4</sub> biosynthesis and neutrophil trafficking, whereas resident macrophages contribute to 6-KPA and LTC<sub>4</sub> biosynthesis. The complement fragment C5a has a minimal role in zymosan-induced inflammation. Selective 5-lipoxygenase (5-LO) inhibitors, zileuton {N(1-benzo[b]thienyl-2-yl-ethyl)-N-hydroxyurea}, TZI-41127 {2-(4-hydroxy-3,5-dimethylphenyl)-5-methoxy-3-methylindole} and cyclooxygenase (CO) inhibitors selectively modulated eicosanoid biosynthesis. Both 5-LO and CO inhibitors attenuated influx of neutrophils to varying degrees. A LTB<sub>4</sub> receptor antagonist, SC-41930 {7-[3-(4-acetyl-3-methoxy-2-propylphenoxy)-propoxy]-3,4-dihydro-8-propyl-2H-1-benzopyran-2-carboxylic acid} and an LTD<sub>4</sub> receptor antagonist, LY-171883 {1-(2-hydroxy-3-propyl-4-(4-1H-tetrazol-5-yl)butoxy-phenylethanone)} (i.v.) attenuated influx of neutrophils and associated LTB<sub>4</sub> biosynthesis. These results suggest that both 5-LO and CO metabolites regulate neutrophil influx in this model. Marked eicosanoid biosynthesis and cellular influx in response to zymosan provides an attractive exptl. paradigm to evaluate anti-inflammatory effects of inhibitors of arachidonate CO or 5-LO pathways.

L204 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 1995:132001 HCAPLUS

DOCUMENT NUMBER: 122:560

TITLE: Phorbol ester-induced dermal inflammation in mice: evaluation of inhibitors of 5-lipoxygenase and antagonists of leukotriene B<sub>4</sub> receptor

AUTHOR(S): Rao, Tadimeti S.; Yu, Stella S.; Djuric, Stevan W.; Isakson, Peter C.

CORPORATE SOURCE: Inflammatory Dis. Res., St. Louis, MO, 63198, USA

SOURCE: Journal of Lipid Mediators and Cell Signalling (1994), 10(3), 213-28  
CODEN: JLMSEO; ISSN: 0929-7855

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the present investigation, the effects of selective inhibitors of 5-lipoxygenase (5-LO), zileuton and TZI-41127, E-6080, AA-861 and antagonists of leukotriene B<sub>4</sub> (LTB<sub>4</sub>) receptors, SC-41930, and SC-51146 and a selective cyclooxygenase inhibitor, indomethacin, were examined in TPA-induced acute mouse dermal inflammation. Topical application of all these agents, except indomethacin, resulted in marked attenuation of TPA-induced edema and influx of neutrophils reflected in myeloperoxidase measurements. Topically applied SC-41930 attenuated TPA-induced edema and

neutrophil influx in a dose-related manner. Oral administration of LTB<sub>4</sub> receptor antagonists either as a pre-treatment or post-treatment attenuated TPA-induced edema and influx of neutrophils. The O-demethyl analog of SC-41930, SC-37920, which was nearly 1000-fold less active than SC-41930 in LTB<sub>4</sub> receptor binding assays, was inactive in inflammation assays, suggesting a role for LTB<sub>4</sub> in this response. Zileuton and TZI-41127 were more effective as anti-inflammatory agents following oral administration than after i.p. administration. I.p. administered indomethacin attenuated edema response but not influx of neutrophils. Taken together, these results suggest a role for leukotrienes in acute inflammation induced by TPA and possible utility of this model to test in vivo 5-LO inhibitors and LTB<sub>4</sub> receptor antagonists.

L204 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:562996 HCAPLUS

DOCUMENT NUMBER: 127:239123

TITLE: Combinations having immunosuppressive effects, containing **cyclooxygenase-2**-inhibitors and **5-lipoxygenase** inhibitors

INVENTOR(S): **Gregory, Susan A.; Isakson, Peter C. ; Anderson, Gary**

PATENT ASSIGNEE(S): G.D. Searle and Co., USA; Gregory, Susan A.; Isakson, Peter C.; Anderson, Gary

SOURCE: PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9729776	A1	19970821	WO 1997-US1558	19970212
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2246265	AA	19970821	CA 1997-2246265	19970212
AU 9718505	A1	19970902	AU 1997-18505	19970212
EP 888127	A1	19990107	EP 1997-904133	19970212
EP 888127	B1	20011212		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI			
JP 2000504723	T2	20000418	JP 1997-529363	19970212
AT 210461	E	20011215	AT 1997-904133	19970212
PT 888127	T	20020531	PT 1997-904133	19970212
ES 2169351	T3	20020701	ES 1997-904133	19970212
US 6376528	B1	20020423	US 1999-430072	19991018
US 2002143033	A1	20021003	US 2002-98644	20020315
PRIORITY APPLN. INFO.:			US 1996-600622	A1 19960213
			WO 1997-US1558	W 19970212
			US 1998-189463	B1 19981110
			US 1999-430072	A3 19991018

OTHER SOURCE(S): MARPAT 127:239123

AB Treatment with a **cyclooxygenase-2** inhibitor and a **5-lipoxygenase** inhibitor is described as being useful in reducing recipient rejection of transplanted organs and for treatment of autoimmune

diseases. 4-[5-(3-Fluoro-4-methoxyphenyl)-3-(difluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide and N'-[3-[5-(4-fluorophenoxy)-2-furyl]-1-methyl-2-propynyl]-N'-hydroxyurea were prepared and a combination of these 2 compds. showed a delay in rejection time of skin grafts while treatment alone of each of these compds. resulted in no prolongation of graft survival.

L204 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:161901 HCAPLUS

TITLE: New dual inhibitors of inducible **cyclooxygenase** (COX-2) and leukotriene biosynthesis as potential new therapeutic agents for rheumatoid arthritis

AUTHOR(S): Sikorski, James A.; Talley, John J.; Norman, Bryan H.; Graneto, Matthew J.; Lu, Hwang-Fun; Devadas, Balekudru; Brown, David L.; **Anderson, Gary D.**; Veenhuizen, Amy W.; et al.

CORPORATE SOURCE: G. D. Searle RandD, St. Louis, MO, 63198, USA

SOURCE: Book of Abstracts, 213th ACS National Meeting, San Francisco, April 13-17 (1997), MEDI-069. American Chemical Society: Washington, D. C.  
CODEN: 64AOAA

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB Pro-inflammatory products of arachidonic acid metabolism mediated by either the prostaglandin or leukotriene pathways have been implicated in many models of inflammatory disease. Consequently, compds. that inhibit the production of both prostaglandins and leukotrienes may exhibit beneficial anti-inflammatory properties. The recent discovery of an inducible **cyclooxygenase** (COX-2) has led to potent and selective COX-2 inhibitors with GI-sparing, anti-inflammatory activity. These results suggest that dual inhibitors of COX-2 and either 5-**lipoxigenase** (5-LO) or LTA4 hydrolase (LTA4H) could be even more effective anti-inflammatory agents. A medicinal chemical strategy will be presented which combines either a 5-LO or LTA4H pharmacophore with a selective, oxazole-based COX-2 inhibitor. Single mols. establishing a chemical proof of concept will be presented that inhibit either the COX-2 and 5-LO or COX-2 and LTA4H enzymes.

L204 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:174992 HCAPLUS

DOCUMENT NUMBER: 126:166479

TITLE: Compositions comprising a **cyclooxygenase-2** inhibitor and a 5-**lipoxigenase** inhibitor for treatment of inflammation and inflammation-related disorders

INVENTOR(S): **Isakson, Peter C.**; **Anderson, Gary D.**; **Gregory, Susan A.**

PATENT ASSIGNEE(S): G.D. Searle and Co., USA

SOURCE: PCT Int. Appl., 73 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9641626	A1	19961227	WO 1996-US10106	19960611
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS,				



LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,  
SE, SG  
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,  
IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN  
CA 2224517 AA 19961227 CA 1996-2224517 19960611  
AU 9661117 A1 19970109 AU 1996-61117 19960611  
EP 833622 A1 19980408 EP 1996-918465 19960611  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI  
JP 11507670 T2 19990706 JP 1997-503273 19960611  
PRIORITY APPLN. INFO.: US 1995-489472 A 19950612  
WO 1996-US10106 W 19960611

OTHER SOURCE(S): MARPAT 126:166479

AB Combinations of a **cyclooxygenase**-2 inhibitor and a 5-  
**lipoxigenase** inhibitor are described for treatment of inflammation  
and inflammation-related disorders. Preparation of e.g. 4-[5-(4-chlorophenyl)-  
3-(trifluoromethyl)-1H-pyrazol-1-yl]benzenesulfonamide is described., as  
are pharmaceutical formulations and activity against collagen-induced  
arthritis in mice.

L204 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:182220 HCAPLUS

DOCUMENT NUMBER: 120:182220

TITLE: Calcium ionophore (A-23187)-induced peritoneal  
eicosanoid biosynthesis: A rapid method to evaluate  
inhibitors of arachidonic acid metabolism in vivo

AUTHOR(S): Rao, T. S.; Currie, J. L.; Shaffer, A. F.;  
**Isakson, P. C.**

CORPORATE SOURCE: Monsanto Co., St Louis, MO, 63198, USA

SOURCE: Mediators of Inflammation (1993), 2(5), 357-62

CODEN: MNFLEF; ISSN: 0962-9351

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The present investigation characterizes calcium ionophore  
(A-23187)-induced peritoneal eicosanoid biosynthesis in the rat. I.p.  
injection of A-23187 (20 µg/rat) stimulated marked biosynthesis of  
6-keto-PGF1α (6-KPA), TxB2, LTC4 and LTB4, with no detectable  
changes on levels of PGE2. Levels of all eicosanoids decreased rapidly  
after a peak which was seen as early as 5 min. Enzyme markers of cellular  
contents of neutrophils and mononuclear cells, MPO and NAG resp.,  
decreased rapidly after ionophore injection; this was followed by  
increases after 60 min. Indomethacin, a selective **cyclooxygenase**  
inhibitor, and zileuton and ICI D-2138, two selective 5-  
**lipoxigenase** inhibitors attenuated prostaglandin and leukotriene  
pathways resp. Oral administration of zileuton (20 mg/kg, p.o.) inhibited  
LTB4 biosynthesis for up to 6 h suggesting a long duration of pharmacol.  
activity in the rats consistent with its longer half-life. The rapid  
onset and the magnitude of increases in levels of eicosanoids render the  
ionophore-induced peritoneal eicosanoid biosynthesis a useful model to  
evaluate pharmacol. profiles of inhibitors of eicosanoid pathways in vivo.

L204 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:69016 HCAPLUS

DOCUMENT NUMBER: 120:69016

TITLE: Evaluation of 5-**lipoxigenase** inhibitors,  
zileuton, A-78773 and ICI-D-2138 in an ionophore  
(A-23187)-induced pleural inflammation model in the  
rat

AUTHOR(S): Rao, Tadimeti S.; Currie, Jerry L.; Shaffer, Alexander  
F.; **Isakson, Peter C.**

CORPORATE SOURCE: Monsanto Co., St. Louis, MO, 63198, USA

SOURCE: Life Sciences (1993), 53(9), PL147-PL152  
CODEN: LIFSAK; ISSN: 0024-3205

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Intrapleural injection of A-23187 (10 µg), a calcium ionophore, elicited rapid increase in biosynthesis of prostaglandins and leukotrienes in a time-dependent manner. 6-Keto-prostaglandin-Flα (6-KPA) was the principal **cyclooxygenase** product with modest increases in levels of thromboxane B2 and prostaglandin-E2. Orally administered indomethacin, a selective **cyclooxygenase** inhibitor, and three selective 5-**lipoxigenase** inhibitors, zileuton, A-78773 and ICI-D-2138 markedly attenuated arachidonate pathways with projected ED50 values of < 1-2 mg/kg. Furthermore, a single oral administration of either ICI-D-2138 or A-78773 (each 20 mg/kg, po) resulted in persistent inhibition of 5-**lipoxigenase** pathway for up to 24 h. These results indicate zileuton, A-78773 and ICI-D-2138 to be potent and selective inhibitors of 5-LO and document the utility of A-23187-induced pleural inflammation in evaluating efficacy of inhibitors of arachidonic acid metabolism in vivo.

L204 ANSWER 9 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 2002:314309 BIOSIS  
DOCUMENT NUMBER: PREV200200314309  
TITLE: Immunosuppressive effects of administration of a **cyclooxygenase-2 inhibitor** and a 5-**lipoxigenase inhibitor**.  
AUTHOR(S): Gregory, Susan A [Inventor, Reprint author];  
Isakson, Peter C [Inventor]; Anderson, Gary [Inventor]  
CORPORATE SOURCE: St. Louis, MO, USA  
ASSIGNEE: G. D. Searle and Co.  
PATENT INFORMATION: US 6376528 April 23, 2002  
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Apr. 23, 2002) Vol. 1257, No. 4.  
<http://www.uspto.gov/web/menu/patdata.html>. e-file.  
CODEN: OGUPE7. ISSN: 0098-1133.  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
ENTRY DATE: Entered STN: 29 May 2002  
Last Updated on STN: 29 May 2002

AB A method to suppress immune, acute or delayed-type hypersensitivity by treatment with a combination of a therapeutically-effective amount of a 5-**lipoxigenase inhibitor** and a **cyclooxygenase-2 inhibitor** is reported. The method may be used, for example, to suppress the immune response associated with organ transplantation, graft versus host disease, and conditions with underlying autoimmune or inflammatory reactivities or responses.

L204 ANSWER 10 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 2001:509444 BIOSIS  
DOCUMENT NUMBER: PREV200100509444  
TITLE: Neuronal expression of **cyclooxygenase 2** increases stroke damage.  
AUTHOR(S): Dore, S. [Reprint author]; Sugo, N. [Reprint author];  
Isakson, P.; Worley, P.; Traystman, R. J. [Reprint author]; Koehler, R. C. [Reprint author]; Hurn, P. D. [Reprint author]; Andreasson, K.  
CORPORATE SOURCE: Dept Anesth/Critical Care Med., Johns Hopkins Univ Sch Med, Baltimore, MD, USA  
SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1,

pp. 878. print.

Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 10-15, 2001.

ISSN: 0190-5295.

## DOCUMENT TYPE:

Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

## LANGUAGE:

English

## ENTRY DATE:

Entered STN: 31 Oct 2001

Last Updated on STN: 23 Feb 2002

- AB The **cyclooxygenases** (COX) catalyze the conversion of **arachidonic** acid to thromboxanes and prostaglandins. Our previous studies of genes involved in the adaptive responses of neurons to synaptic activity, we demonstrated COX-2 as a NMDA-dependent activity-regulated gene in the brain. There are two isoforms of **cyclooxygenase**: COX-1 is expressed constitutively in most tissues and is present in normal conditions at very low levels in the brain; COX-2 is highly expressed in neurons of hippocampus, amygdala and layers II/III of cortex in paradigms of excitotoxicity, such as kindling, traumatic head injury and in stroke. As a model of increased neuronal COX activity, we have generated lines of transgenic mice that overexpress the human isoform of COX-2 (hCOX-2) under the control of a neuronal promoter. We observed higher COX-2 levels in the hippocampus, cortex and striatum and we quantified in brain homogenates an overproduction of prostaglandins close to 6 fold. After submitting these mice to transient cerebral ischemia by performing middle cerebral artery occlusion (MCAO) (1 hour) and then allowing reperfusion (4 days), we observed increase infarction volume in mice overexpressing COX-2 (45.7±6.4 mm<sup>3</sup>, mean±SEM, n=10) as compared to non-transgenic littermates (25.2±4.0 mm<sup>3</sup>, n=17) (p<0.05). These findings demonstrate that increased neuronal COX activity is detrimental to excitotoxic-induced injury. Limiting COX-2 enzymatic activity with specific **inhibitors** may be a potential strategy to protect against neuronal injury induced by cerebral ischemia.

L204 ANSWER 11 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2000:100696 BIOSIS

DOCUMENT NUMBER: PREV200000100696

TITLE: Effects of celecoxib, a novel **cyclooxygenase-2 inhibitor**, on platelet function in healthy adults: A randomized, controlled trial.

AUTHOR(S): Leese, Philip T.; Hubbard, Richard C.; Karim, Aziz; Isakson, Peter C.; Yu, Shawn S.; Geis, G. Steven [Reprint author]

CORPORATE SOURCE: Searle Clinical Research, 4901 Searle Parkway, A3E, Skokie, IL, 60077, USA

SOURCE: Journal of Clinical Pharmacology, (Feb., 2000) Vol. 40, No. 2, pp. 124-132. print.

CODEN: JCPCBR. ISSN: 0091-2700.

## DOCUMENT TYPE:

Article

## LANGUAGE:

English

## ENTRY DATE:

Entered STN: 15 Mar 2000

Last Updated on STN: 3 Jan 2002

- AB Conventional nonsteroidal anti-inflammatory drugs (NSAIDs) nonspecifically **inhibit cyclooxygenase-1** (COX-1), an enzyme critical to normal platelet function, and COX-2, which mediates inflammatory response mechanisms. Celecoxib, an antiarthritic agent that **inhibits** COX-2 but spares COX-1 at therapeutic doses, is expected to have minimal effects on platelet function. A double-blind, randomized, placebo-controlled study of 10 days' duration

was conducted in 24 healthy adults to compare the effects on platelet function of a supratherapeutic dose of celecoxib (600 mg bid) with a standard dose of naproxen (500 mg bid), a conventional NSAID. Ex vivo platelet aggregation in response to standard agonists (collagen, **arachidonate**, or U46619 (a thromboxane A2 receptor agonist)), bleeding time, and serum thromboxane B2 (TxB2) level were measured. Unlike celecoxib or placebo, naproxen produced statistically significant reductions in platelet aggregation and serum TxB2 levels and increased bleeding time. The results indicate that even at supratherapeutic doses, celecoxib will not interfere with normal mechanisms of platelet aggregation and hemostasis, supporting the premise that celecoxib is COX-1 sparing relative to conventional NSAIDs.

L204 ANSWER 12 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1999:896 BIOSIS

DOCUMENT NUMBER: PREV199900000896

TITLE: Pharmacological analysis of **cyclooxygenase-1** in inflammation.

AUTHOR(S): Smith, Christopher J.; Zhang, Yan; Koboldt, Carol M.; Muhammad, Jerry; Zweifel, Ben S.; Shafer, Alex; Talley, John J.; Masferrer, Jaime L.; Seibert, Karen; **Isakson, Peter C.** [Reprint author]

CORPORATE SOURCE: Searle Res. Development, 700 Chesterfield Parkway North, St. Louis, MO 63198, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (Oct. 27, 1998) Vol. 95, No. 22, pp. 13313-13318. print.  
CODEN: PNASA6. ISSN: 0027-8424.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 11 Jan 1999

Last Updated on STN: 11 Jan 1999

AB The enzymes **cyclooxygenase-1** and **cyclooxygenase-2** (COX-1 and COX-2) catalyze the conversion of **arachidonic** acid to prostaglandin (PG) H<sub>2</sub>, the precursor of PGs and thromboxane. These lipid mediators play important roles in inflammation and pain and in normal physiological functions. While there are abundant data indicating that the inducible isoform, COX-2, is important in inflammation and pain, the constitutively expressed isoform, COX-1, has also been suggested to play a role in inflammatory processes. To address the latter question pharmacologically, we used a highly selective COX-1 inhibitor, SC-560 (COX-1 IC<sub>50</sub> = 0.009 μM; COX-2 IC<sub>50</sub> = 6.3 μM). SC-560 inhibited COX-1-derived platelet thromboxane B<sub>2</sub>, gastric PGE<sub>2</sub>, and dermal PGE<sub>2</sub> production, indicating that it was orally active, but did not inhibit COX-2-derived PGs in the lipopolysaccharide-induced rat air pouch. Therapeutic or prophylactic administration of SC-560 in the rat carrageenan footpad model did not affect acute inflammation or hyperalgesia at doses that markedly inhibited in vivo COX-1 activity. By contrast, celecoxib, a selective COX-2 inhibitor, was anti-inflammatory and analgesic in this model. Paradoxically, both SC-560 and celecoxib reduced paw PGs to equivalent levels. Increased levels of PGs were found in the cerebrospinal fluid after carrageenan injection and were markedly reduced by celecoxib, but were not affected by SC-560. These results suggest that, in addition to the role of peripherally produced PGs, there is a critical, centrally mediated neurological component to inflammatory pain that is mediated at least in part by COX-2.

L204 ANSWER 13 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 ACCESSION NUMBER: 1998:163956 BIOSIS  
 DOCUMENT NUMBER: PREV199800163956  
 TITLE: Regulation of prostaglandin biosynthesis in vivo by glutathione.  
 AUTHOR(S): Margalit, Alon; Hauser, Scott D.; Zweifel, Ben S.; Anderson, Melissa A.; **Isakson, Peter C.** [Reprint author]  
 CORPORATE SOURCE: Searle Res. Dev., 700 Chesterfield Parkway N., St. Louis, MO 63198, USA  
 SOURCE: American Journal of Physiology, (Feb., 1998) Vol. 274, No. 2 PART 2, pp. R294-R302. print.  
 CODEN: AJPHAP. ISSN: 0002-9513.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 6 Apr 1998  
 Last Updated on STN: 6 Apr 1998

AB Intraperitoneal administration of urate crystals to mice reduced subsequent macrophage conversion of **arachidonic** acid (AA) to prostaglandins (PGs) and 12-hydroxyeicosatetraenoic acid for up to 6 h. In contrast, levels of 12-hydroxyheptadecatrienoic acid (12-HHT) were markedly elevated. This metabolic profile was previously observed in vitro when recombinant **cyclooxygenase** (COX) enzymes were incubated with reduced glutathione (GSH). Analysis of peritoneal GSH levels revealed a fivefold elevation after urate crystal administration. The GSH synthesis **inhibitor** L-buthionine-(S,R)-sulfoximine partially reversed the urate crystal effect on both GSH elevation and PG synthesis. Moreover, addition of exogenous GSH to isolated peritoneal macrophages shifted AA metabolism from PGs to 12-HHT. Urate crystal administration reduced **COX-1**, but induced **COX-2** expression in peritoneal cells. The reduction of **COX-1** may contribute to the attenuation of PG synthesis after 1 and 2 h, but PG synthesis remained **inhibited** up to 6 h, when **COX-2** levels were high. Overall, our results indicate that elevated GSH levels **inhibit** PG production in this model and provide in vivo evidence for the role of GSH in the regulation of PG biosynthesis.

L204 ANSWER 14 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 ACCESSION NUMBER: 1997:261255 BIOSIS  
 DOCUMENT NUMBER: PREV199799567858  
 TITLE: **Inhibition** of human colon cancer cell growth by selective **inhibition** of **cyclooxygenase** -2.  
 AUTHOR(S): Sheng, Hongmiao; Shao, Jinyi; Kirkland, Susan C.; **Isakson, Peter**; Coffey, Robert J.; Morrow, Jason; Beauchamp, R. Daniel; Dubois, Raymond N.  
 CORPORATE SOURCE: Dep. Med./GI, MCN C-2104, Vanderbilt Univ. Med. Cent., Nashville, TN 37232-2279, USA  
 SOURCE: Journal of Clinical Investigation, (1997) Vol. 99, No. 9, pp. 2254-2259.  
 CODEN: JCINAO. ISSN: 0021-9738.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 24 Jun 1997  
 Last Updated on STN: 24 Jun 1997

AB A considerable amount of evidence collected from several different experimental systems indicates that **cyclooxygenase-2** (**COX-2**) may play a role in colorectal tumorigenesis. Large epidemiologic studies have shown a 40-50% reduction in mortality from colorectal cancer in persons taking aspirin or other nonsteroidal

antiinflammatory drugs on a regular basis. One property shared by all of these drugs is their ability to **inhibit COX**, a key enzyme in the conversion of **arachidonic** acid to prostaglandins. Two isoforms of **COX** have been characterized, **COX-1** and **COX-2**. **COX-2** is expressed at high levels in intestinal tumors in humans and rodents. In this study, we selected two transformed human colon cancer cell lines for studies on the role of **COX-2** in intestinal tumorigenesis. We evaluated HCA-7 cells which express high levels of **COX-2** protein constitutively and HCT-116 cells which lack **COX-2** protein. Treatment of nude mice implanted with HCA-7 cells with a selective **COX-2 inhibitor** (SC-58125), reduced tumor formation by 85-90%. SC-58125 also **inhibited** colony formation of cultured HCA-7 cells. Conversely, SC-58125 had no effect on HCT-116 implants in nude mice or colony formation in culture. Here we provide evidence that there may be a direct link between **inhibition** of intestinal cancer growth and selective **inhibition** of the **COX-2** pathway.

L204 ANSWER 15 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1997:197743 BIOSIS  
DOCUMENT NUMBER: PREV199799496946  
TITLE: New dual **inhibitors** of inducible  
**cyclooxygenase** (COX-2) and leukotriene biosynthesis  
as potential new therapeutic agents for rheumatoid  
arthritis.  
AUTHOR(S): Sikorski, James A.; Talley, John J.; Noman, Bryan H.;  
Graneto, Matthew J.; Lu, Hwang-Fun; Devadas, Balekudru;  
Brown, David L.; **Anderson, Gray D.**; Veenhuizen,  
Amy W.; McGarity, Kelly L.; Askonas, Leslie J.; Koboldt,  
Carol M.; Keith, Robert H.; **Gregory, Susan A.**  
CORPORATE SOURCE: G.D. Searle R and D, 700 Chesterfield Parkway North, St.  
Louis, MO 63198, USA  
SOURCE: Abstracts of Papers American Chemical Society, (1997) Vol.  
213, No. 1-3, pp. MEDI 69.  
Meeting Info.: 213th National Meeting of the American  
Chemical Society. San Francisco, California, USA. April  
13-17, 1997.  
CODEN: ACSRAL. ISSN: 0065-7727.  
DOCUMENT TYPE: Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)  
LANGUAGE: English  
ENTRY DATE: Entered STN: 2 May 1997  
Last Updated on STN: 2 Jun 1997

L204 ANSWER 16 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1997:41491 BIOSIS  
DOCUMENT NUMBER: PREV199799333479  
TITLE: Structural basis for selective **inhibition** of  
cyclooxygenase-2 by anti-inflammatory agents.  
AUTHOR(S): Kurumbail, Ravi G. [Reprint author]; Stevens, Anna M.;  
Gierse, James K.; McDonald, Joseph J.; Stegeman, Roderick  
A.; Pak, Jina Y.; Gildehaus, Daniel; Miyashiro, Julie M.;  
Penning, Thomas D.; Seibert, Karen; **Isakson, Peter**  
C.; Stallings, William C.  
CORPORATE SOURCE: G.D. Searle, 700 Chesterfield Parkway North, St. Louis, MO  
63198, USA  
SOURCE: Nature (London), (1996) Vol. 384, No. 6610, pp. 644-648.  
CODEN: NATUAS. ISSN: 0028-0836.  
DOCUMENT TYPE: Article  
LANGUAGE: English

ENTRY DATE: Entered STN: 28 Jan 1997  
Last Updated on STN: 28 Jan 1997

AB Prostaglandins and glucocorticoids are potent mediators of inflammation. Non-steroidal anti-inflammatory drugs (NSAIDs) exert their effects by **inhibition** of prostaglandin production. The pharmacological target of NSAIDs is **cyclooxygenase** (COX, also known as PHG synthase), which catalyses the first committed step in **arachidonic-acid** metabolism. Two isoforms of the membrane protein COX are known: COX-1, which is constitutively expressed in most tissues, is responsible for the physiological production of prostaglandins,; and COX-2, which is induced by cytokines, mitogens and endotoxins in inflammatory cells, is responsible for the elevated production of prostaglandins during inflammation. The structure of ovine COX-1 complexed with several NSAIDs has been determined. Here we report the structures of unliganded murine COX-2 and complexes with flurbiprofen, indomethacin and SC-558, a selective COX-2 **inhibitor**, determined at 3.0 to 2.5 Å resolution. These structures explain the structural basis for the selective **inhibition** of COX-2, and demonstrate some of the conformational changes associated with time-dependent **inhibition**.

L204 ANSWER 17 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1995:124837 BIOSIS  
DOCUMENT NUMBER: PREV199598139137  
TITLE: Expression and selective **inhibition** of the constitutive and inducible forms of human cyclo-oxygenase.  
AUTHOR(S): Gierse, James K.; Hauser, Scott D.; Creely, David P.; Koboldt, Carol; Rangwala, Shaukat H.; **Isakson, Peter C.**; Seibert, Karen [Reprint author]  
CORPORATE SOURCE: Searle Inflammatory Disease Res., Monsanto Company, 800 N. Lindberg Boulevard, St. Louis MO 63167, USA  
SOURCE: Biochemical Journal, (1995) Vol. 305, No. 2, pp. 479-484. ISSN: 0264-6021.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
ENTRY DATE: Entered STN: 29 Mar 1995  
Last Updated on STN: 29 Mar 1995

AB The enzyme cyclo-oxygenase catalyses the oxygenation of **arachidonic** acid, leading to the formation of prostaglandins. Recently two forms of cyclo-oxygenase have been described: a constitutive (COX-1) enzyme present in most cells and tissues, and an inducible (COX-2) isoenzyme observed in many cells in response to pro-inflammatory cytokines. Constitutive and inducible forms of human cyclo-oxygenase (hCOX-1 and hCOX2) were cloned and expressed in insect cells, utilizing a baculovirus expression system. hCOX-1 had a specific activity of 18.8  $\mu\text{mol}$  of O-2/mg with a K-m of 13.8  $\mu\text{M}$  for **arachidonate** and V-maximum of 1500 nmol of O-2/nmol of enzyme, whereas hCOX-2 had a specific activity of 12.2  $\mu\text{mol}$  of O-2/mg with a K-m of 8.7  $\mu\text{M}$  for **arachidonate** and a V-maximum of 1090 nmol of O-2/nmol of enzyme. Indomethacin **inhibited** both hCOX-1 and hCOX-2, whereas NS-398 and Dup-697 selectively **inhibited** hCOX-2. Both NS-398 and Dup-697 exhibited time-dependent inactivation of hCOX-2, as did indomethacin on both enzymes. The competitive **inhibitor** of hCOX-1, mefenamic acid, also displayed competitive **inhibition** of hCOX-2. These results demonstrate the ability to generate selective non-steroidal anti-inflammatory drugs (NSAIDs), which could provide useful improvement therapeutically in the treatment of chronic inflammatory disease.

L204 ANSWER 18 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1995:83000 BIOSIS  
DOCUMENT NUMBER: PREV199598097300  
TITLE: Pharmacological and biochemical demonstration of the role

of **cyclooxygenase 2** in inflammation and pain.

AUTHOR(S): Seibert, Karen [Reprint author]; Zhang, Yan; Leahy, Kathleen; Hauser, Scott; Masferrer, Jaime; Perkins, William; Lee, Len; **Isakson, Peter**

CORPORATE SOURCE: G.D. Searle, Monsanto Co., 800 North Lindbergh Boulevard, St. Louis, MO 63167, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 25, pp. 12013-12017.

CODEN: PNASA6. ISSN: 0027-8424.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 22 Feb 1995

Last Updated on STN: 27 Apr 1995

AB Nonsteroidal antiinflammatory drugs (NSAIDs) are widely used for the treatment of inflammatory diseases, but significant side effects such as gastrointestinal erosion and renal damage limit their use. NSAIDs **inhibit** the enzyme **cyclooxygenase (COX)**, which catalyzes the conversion of **arachidonic** acid to prostaglandins (PGs) and thromboxane. Two forms of **COX** have been identified-- **COX-1**, which is constitutively expressed in most tissues and organs, and the inducible enzyme, **COX-2**, which has been localized primarily to inflammatory cells and tissues. In an animal model of acute inflammation (injection of carrageenan into the footpad), edema was produced that was associated with marked accumulation of **COX-2** mRNA and thromboxane. A selective **inhibitor** of **COX-2** (SC-58125) **inhibited** edema at the inflammatory site and was analgesic but had no effect on PG production in the stomach and did not cause gastric toxicity. These data suggest that selective **inhibition** of **COX-2** may produce superior antiinflammatory drugs with substantial safety advantages over existing NSAIDs.

L204 ANSWER 19 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1995:68463 BIOSIS

DOCUMENT NUMBER: PREV199598082763

TITLE: Beta-Adrenoceptors mediate **inhibition** of (1H)-acetylcholine release from the isolated rat and guinea-pig trachea: Role of the airway mucosa and prostaglandins.

AUTHOR(S): Wessler, Ignaz [Reprint author]; Reinheimer, Torsten; Brunn, Gernot; **Anderson, Gary P.**; MacLagan, Jennifer; Racke, Kurt

CORPORATE SOURCE: Dep. Pharmacol., University Mainz, Obere Zahlbacher Strasse 67, D-55101 Mainz, Germany

SOURCE: British Journal of Pharmacology, (1994) Vol. 113, No. 4, pp. 1221-1230.

CODEN: BJPCBM. ISSN: 0007-1188.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 8 Feb 1995

Last Updated on STN: 14 Mar 1995

AB 1. Rat or guinea pig isolated tracheae were labelled with (3H)-choline to measure evoked tritium outflow, which reflects neuronal release of (3H)-acetylcholine. Tritium outflow was evoked either by electrical stimulation of the extrinsic vagal nerve (rat tracheae) or by 27 mm



potassium (guinea pig tracheae). 2. In rat tracheae isoprenaline (0.01, 0.1  $\mu$ -M) **inhibited** evoked (3H)-acetylcholine release, whereas beta-2-adrenoceptor-selective agonists (fenoterol, formoterol, salbutamol) were ineffective. 3. The **inhibitory** effect of isoprenaline was abolished under the following conditions: (i) presence of propranolol (1  $\mu$ -M) or of the beta-1-selective antagonist CGP 20712 A (0.1  $\mu$ -M); (ii) removal of the mucosa at the start of the experiments; (iii) blockade of **cyclooxygenase** activity by 3  $\mu$ -M indomethacin. 4. In rat isolated tracheae prelabelled with (3H)-**arachidonic** acid, isoprenaline (0.1  $\mu$ -M) but not formoterol (0.01  $\mu$ -M) enhanced the outflow of (3H)-prostaglandins (PGD-2, PGE-2). This effect was blocked by 0.1  $\mu$ -M CGP 20712 A. 5. In guinea pig tracheae electrical stimulation of the extrinsic vagal nerve did not cause a constant release of (3H)-acetylcholine, but 27 mM potassium elicited a reproducible release of (3H)-acetylcholine. In this species both isoprenaline (0.1  $\mu$ -M) and formoterol (0.01  $\mu$ -M) **inhibited** evoked (3H)-acetylcholine release. **Inhibition** was abolished under the following conditions: (i) presence of propranolol (1  $\mu$ -M) or of the beta-2-selective antagonist ICI 118551 (0.3  $\mu$ -M); (ii) removal of the mucosa at the start of the experiments; (iii) blockade of **cyclooxygenase** activity by 3  $\mu$ -M indomethacin. 6. In conclusion, the present experiments have demonstrated that activation of beta-adrenoceptors localized in the mucosa mediates **inhibition** of (3H)-acetylcholine release from the neuroeffector junctions of the pulmonary, parasympathetic nerves most probably by the liberation of **inhibitory** prostaglandins from the airway mucosa. The adrenoceptor subtype involved differs in rat (beta-1 subtype) and guinea pig (beta-2 subtype) airways.

L204 ANSWER 20 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 ACCESSION NUMBER: 1993:413601 BIOSIS  
 DOCUMENT NUMBER: PREV199396079326

TITLE: Evaluation of 5-lipoxygenase inhibitors  
 , zileuton, A-78773 and ICI-D-2138 in an ionophore  
 (A-23187)-induced pleural inflammation model in the rat.  
 AUTHOR(S): Rao, Tadimeti S. [Reprint author]; Currie, Jerry L.;  
 Shaffer, Alexander F.; Isakson, Peter C.  
 CORPORATE SOURCE: Searle Res. Dev., Mail Stop AA 5E, c/o Monsanto Co., 700  
 Chesterfield Pkwy North, St. Louis, MO 63198, USA  
 SOURCE: Life Sciences, (1993) Vol. 53, No. 9, pp. PL-147-PL-152.  
 CODEN: LIFSAK. ISSN: 0024-3205.

DOCUMENT TYPE: Article  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 8 Sep 1993  
 Last Updated on STN: 9 Sep 1993

AB Intrapleural injection of A-23187 (10  $\mu$ -g), a calcium ionophore, elicited rapid increase in biosynthesis of prostaglandins and leukotrienes in a time-dependent manner. 6-Keto-prostaglandin-F-1 $\alpha$  (6-KPA) was the principal **cyclooxygenase** product with modest increases in levels of thromboxane B-2 and prostaglandin-E-2. Orally administered indomethacin, a selective **cyclooxygenase inhibitor**, and three selective 5-lipoxygenase inhibitors, zileuton, A-78773 and ICI-D-2138 markedly attenuated respective **arachidonate** pathways with projected ED-50 values of lt 1-2 mg/kg. Furthermore, a single oral administration of either ICI-D-2138 or A-78773 (each 20 mg/kg, po) resulted in persistent **inhibition** of 5-lipoxygenase pathway for up to 24 hr. These results indicate zileuton, A-78773 and ICI-D-2138 to be potent and selective **inhibitors** of 5-LO and document the utility of A-23187-induced pleural inflammation in evaluating efficacy of **inhibitors** of

**arachidonic acid metabolism in vivo.**

L204 ANSWER 21 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 ACCESSION NUMBER: 1990:513802 BIOSIS  
 DOCUMENT NUMBER: PREV199090131078; BA90:131078  
 TITLE: SIGNAL TRANSDUCTION BY THE PLATELET FC RECEPTOR.  
 AUTHOR(S): **ANDERSON G P** [Reprint author]; **ANDERSON C L**  
 CORPORATE SOURCE: DAVIS MED RES CENTER, ROOM 2054, 480 W 9TH AVE, COLUMBUS,  
 OHIO 43210, USA  
 SOURCE: Blood, (1990) Vol. 76, No. 6, pp. 1165-1172.  
 CODEN: BLOOAW. ISSN: 0006-4971.  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: BA  
 LANGUAGE: ENGLISH  
 ENTRY DATE: Entered STN: 19 Nov 1990  
 Last Updated on STN: 20 Nov 1990

AB We have evaluated the mechanism by which crosslinking human platelet Fc receptor (FcR) for IgG triggers platelet aggregation and the platelet release reaction. Platelet FcR was crosslinked by incubating purified human platelets with anti-FcRII monoclonal antibody and F(ab')<sub>2</sub> anti-mouse Ig. The resultant [Ca<sup>2+</sup>]<sub>i</sub> increase, monitored by Fura-2 and measured in the absence of extracellular Ca<sup>2+</sup>, reached a peak of 750 ± 50 nmol/L. The effects of **cyclooxygenase inhibitors**, aspirin and indomethacin, and a phospholipase A<sub>2</sub> **inhibitor**, dibromoacetophenone, were examined. Regardless of the **inhibitor**, at least 25% of the [Ca<sup>2+</sup>]<sub>i</sub> increase remained. Thrombin (0.2 U/mL) stimulated an immediate [Ca<sup>2+</sup>]<sub>i</sub> increase that reached 1.95 ± 0.8 μmol/L. The [Ca<sup>2+</sup>]<sub>i</sub> increase generated by thrombin was only slightly reduced by these **inhibitors**. Crosslinking the FcRII of platelets resulted in a fivefold increase in the production of [3H]inositol phosphates, (IP) which, in the absence of extracellular Ca<sup>2+</sup> was insensitive to aspirin. The activation of a [Ca<sup>2+</sup>]<sub>i</sub> increase along with the measured increases in IP indicate that FcRII crosslinking leads to the activation of phospholipase C (PLC). In contrast to thrombin, platelet activation via FcRII depends to a large extent on **arachidonic acid metabolites**. However, neither **cyclooxygenase** nor phospholipase A<sub>2</sub> **inhibitors** completely blocked FcRII-stimulated [Ca<sup>2+</sup>]<sub>i</sub> increase. These observations led us to propose that crosslinking of platelet FcRII initially activates PLC.

L204 ANSWER 22 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 ACCESSION NUMBER: 1988:401052 BIOSIS  
 DOCUMENT NUMBER: PREV198886073691; BA86:73691  
 TITLE: **LIPOXYGENASE METABOLITES MEDIATED INCREASED**  
**AIRWAYS RESPONSIVENESS TO HISTAMINE AFTER ACUTE PLATELET**  
**ACTIVATING FACTOR EXPOSURE IN THE GUINEA-PIG.**  
 AUTHOR(S): **ANDERSON G P** [Reprint author]; **FENNESSY M R**  
 CORPORATE SOURCE: DEP PHARMACOL, UNIV MELBOURNE, PARKVILLE, VICTORIA 3052,  
 AUSTRALIA  
 SOURCE: Agents and Actions, (1988) Vol. 24, No. 1-2, pp. 8-19.  
 CODEN: AGACBH. ISSN: 0065-4299.  
 DOCUMENT TYPE: Article  
 FILE SEGMENT: BA  
 LANGUAGE: ENGLISH  
 ENTRY DATE: Entered STN: 7 Sep 1988  
 Last Updated on STN: 7 Sep 1988

AB Platelet activating factor (Paf, 0.02 μg/kg, i.v. bolus) caused an acute increase in airways responsiveness to histamine in anaesthetized guinea-pigs prepared for recording airways resistance (RL) and dynamic

compliance (Cdyn). Aspirin pretreatment (10 mg/kg, i.v.) attenuated the return of airways responsiveness to prechallenge levels. Pretreatment with the combined **cyclooxygenase/lipoxygenase inhibitors** BW 755C (20 mg/kg, i.v.) and ETYA (20 mg/kg, i.v.), or with the putative cysteinyl-containing leukotriene antagonist FPL 55712 (0.25 mg/kg/min, i.v.), or a Paf antagonist SRI 63441 (2.5 mg/kg, i.v.), prevented Paf-induced increased airways responsiveness. **Inhibitors** of leukotriene synthesis, BW 755C and ETYA, or action, FPL 55712, had variable effects on Paf-induced bronchoconstriction. These data suggest that **lipoxygenase** metabolites, possibly leukotrienes, may mediate an acute increase in airways responsiveness to histamine after Paf exposure.

L204 ANSWER 23 OF 23 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
ACCESSION NUMBER: 1988:401053 BIOSIS  
DOCUMENT NUMBER: PREV198886073692; BA86:73692  
TITLE: INCREASED AIRWAYS RESPONSIVENESS TO HISTAMINE INDUCED BY  
PLATELET ACTIVATING FACTOR IN THE GUINEA-PIG POSSIBLE ROLE  
OF **LIPOXYGENASE** METABOLITES.  
AUTHOR(S): **ANDERSON G P** [Reprint author]; WHITE H L;  
FENNESSY M R  
CORPORATE SOURCE: DEP PHARMACOL, UNIV MELBOURNE, PARKVILLE, VICTORIA 3052,  
AUSTRALIA  
SOURCE: Agents and Actions, (1988) Vol. 24, No. 1-2, pp. 1-7.  
CODEN: AGACBH. ISSN: 0065-4299.  
DOCUMENT TYPE: Article  
FILE SEGMENT: BA  
LANGUAGE: ENGLISH  
ENTRY DATE: Entered STN: 7 Sep 1988  
Last Updated on STN: 7 Sep 1988

AB In anaesthetized guinea-pigs pretreated with propranolol (1 mg/kg, i.v.), platelet activating factor (Paf, 0.02 µg/kg, i.v.) caused an acute increase in airways response to histamine (0.5-3.0 µg/kg, i.v.) measured as intratracheal pressure. Treatment with the **cyclooxygenase inhibitors**, aspirin (10 mg/kg, i.v.) or indomethacin (5 mg/kg, i.v.), enhanced the magnitude and duration of this effect but a combined **lipoxygenase/cyclooxygenase inhibitor**, BW 755C (20 mg/kg, i.v.), prevented the increase in responsiveness. In aspirin treated animals, a putative **lipoxygenase inhibitor** NDGA (10 mg/kg, i.v.), or atropine methyl nitrate (1 mg/kg, i.v.) or bilateral vagotomy reduced the magnitude of Paf-induced increased histamine responses but did not prevent the effect. Bronchoconstriction induced by Paf was variably influenced by the drug treatments. These data suggest that Paf causes an acute increase in airways responsiveness to histamine in the guinea-pig through a mechanism that may, in part, be dependent on the release of **lipoxygenase** metabolites.

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